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MALARIAL FEVERS IN THE UNITED STATES.[1]

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The investigation of the prevalence and geographic distribution of malarial fevers has been undertaken by the United States Public Health Service. To this work I was first detailed by the Surgeon General, February 28, 1912, to make a study in Alabama. On July 8, 1913, general orders were issued to include the States of Arkansas, Mississippi, South Carolina, Georgia, Florida, and later North Carolina and Tennessee.

The first step taken was to secure the available morbidity and mortality records of the States. Mortality statistics were available in only two of these States, Alabama, beginning with the year 1910, and Mississippi, beginning with November, 1912.

These have given some interesting data. For the three years, 1910, 1911, and 1912, for Alabama, the reports showed that nearly one-third (32.7 per cent) of all deaths registered as due to malarial fever occurred among children in the first decade of life, and during the first and second decades of life together, 44.6 per cent.

Taken according to sex and color, the deaths registered for white males and white females were about the same, whereas the number of colored deaths was 1.44 times greater than that of the whites, and that of colored females larger than that of colored males.

The statistics from Mississippi for the first 10 months of 1913, show that the deaths registered as due to malaria were 2.3 times as great in number among the colored as among the whites. They also showed 1 death registered in the urban districts from this cause, as against 7.1 in the rural districts, confirming the statement generally made, that malaria is mainly a rural disease.

Morbidity Data.

For the purpose of obtaining morbidity statistics and other data having a bearing on the subject of malaria, such as species of mosquitoes and their breeding places, and prophylactic measures in use,

[1] Read before the Southeastern Sanitary Association at its meeting held at Columbia, S. C., Feb. 12 and 13, 1914.

circular postal cards were mailed to physicians in the States of Alabama, Arkansas, Mississippi, Georgia, South Carolina, and Florida, calling for this information for the months of August, September, October, and November.

These have been tabulated by counties under each State and have been or will be published in reports on each State.

Only a brief summary of these may here be given to convey a general idea of the prevalence of the disease.

The months for which reports were received from each of the States and which are to be considered in this summary were for August, September, and October from Arkansas and Georgia; August, September, October, and November from South Carolina, Mississippi, and Florida; and May, June, August, September, October, and November from Alabama.

It must also be remembered that the returns from all postal cards mailed averaged about one-sixth (16.53 per cent), so that the figures here cited represent the reports of one-sixth of the physicians who received postals.

For Alabama the reports for the six months of 1913 gave a total of 12,080 cases of malaria; for Arkansas for the four months, 18,528 cases; for South Carolina for the four months, 12,000 cases; for Florida for the four months, 9,190 cases; and for the three months Georgia had 9,825 cases.

The State board of health reports for the State of Mississippi give a total of 61,811 cases for the year (January to December) 1913.

Cases were reported from every county in the States of Arkansas, Alabama, and Mississippi; all counties in South Carolina and Florida, except one in each State, from which no reports were received, and in 138 counties of the 148 in Georgia.

Seasonal prevalence.—The disease prevails throughout the year in the States of Alabama and Mississippi. No statistics of the seasonal prevalence in the other States are yet available.

It appears that the months of greatest prevalence in all these States are August and September. From all available data the disease begins to increase in the month of May, reaching its height in August, subsiding slightly in September, rapidly in October and November, and remaining about the same for the months of December to April.

The general reports and the consensus of opinion of physicians in the seven States visited are that malarial fevers prevailed to a much less extent during 1913 than in 1912. From data I have, the proportion was 1 to 3.

It would be of interest to study the meteorological reports of the Weather Bureau in a number of places in each State in this connection,

in particular the relative amount of precipitation each year. For example, I found that in Mobile, Ala., the precipitation for the year 1912, which was a highly malarious year, was 89.86 inches, and for 1913, 61.42. The precipitation for 1912 for each month in the year averaged 2.32 inches more than the normal.

Types of infection.—All three types were reported in all six States, the tertian type being most prevalent. For the period of four months, August to November, 1913, in the six States, there was a total of 8,519 cases of malaria in which the diagnosis was reported confirmed microscopically. Of this number more than five-eighths (65.2 per cent) were reported to have been tertian, one-eighth (12.78 per cent) quartan and nearly one-fourth (22.02 per cent) estivo-autumnal in type. Florida and Mississippi are the only States where the quartan type was confirmed in State laboratories. I have seen but three cases of quartan malaria which originated in Alabama during my three years' service in Mobile.

It is suggested therefore that physicians using the microscope have their quartans confirmed, as many details in determining the species may be overlooked. I have had one specimen submitted to me, said to be quartan and estivo-autumnal mixed, which was, on careful examination, found to be tertian and estivo-autumnal.

Cases among children under 15 years of age.—Of 91,061 cases of malarial fever reported, 27,394 cases (30.08 per cent), nearly one-third were said to have occurred in children under 15 years of age. The percentage among the States was 28.76 per cent for Alabama, 38 per cent for Arkansas, 26.76 per cent for Florida, 26.32 per cent for Georgia, 30.05 per cent for Mississippi, and 24.39 per cent for South Carolina; the highest, therefore, being in Arkansas and the lowest in South Carolina.

Prophylactic Measures.

One or more of the following measures were reported as being in use in each State, viz: Oiling, screening, drainage, quinine, and general sanitation, but in no locality was a systematic antimalarial campaign reported to be in progress.

Mosquitoes.

Anopheles mosquitoes were said to be present in—

65 of the 79 counties in Mississippi.
46 of the 67 counties in Alabama.
40 of the 44 counties in South Carolina.
36 of the 50 counties in Florida.
51 of the 148 counties in Georgia.
63 of the 75 counties in Arkansas.

Malarial Surveys.

Surveys were made in selected localities during 1913 in the States of Arkansas, Alabama, and North Carolina, in which the topographic and climatic conditions of the locality, and social, hygienic, and economic conditions of the communities and industries were studied.

In each place visited Anopheles mosquito breeding places were found, and *Anopheles quadrimaculatus* the prevailing species. *Anopheles punctipennis* and *Anopheles crucians* were also found in these States, but to the first-mentioned species may be attributed the spread of malaria.

A malarial parasite index from blood examinations was made in five places in Arkansas, four places in Alabama, and eight places, which included a farm near Rockingham, in North Carolina.

In Arkansas there were 802 persons examined, representing about 3½ per cent of the population in the places visited, of which 53 (6.6 per cent), or about 1 in 16, showed parasite infection.

In Alabama there were 664 persons examined, of whom 25 (3.76 per cent), or about 1 in 26, showed parasite infection.

The largest number of examinations was made in North Carolina, in which State blood specimens were obtained from 3,613 persons, representing nearly 8½ per cent, or one-twelfth of the population of the places visited. There were 309 persons found to be carrying the malarial parasite, practically 1 out of every 12, equal to 8.55 per cent.

A summary report of the examinations made in each State, giving the color and types of infection found, is given in the following tables:

ALABAMA.

Place.	Examined.			Number infected.			Types.	
	White.	Colored.	Total.	White.	Colored.	Per cent.	Tertian.	Estivo-autumnal.
Anniston	131	15	146	10	2	8.22	8	4
Plateau	8	104	112	.....	2	1.80	1	1
Leeds	209	.....	209	4	.....	1.91	4	.....
Montevallo	197	.....	197	7	.....	3.55	7	.....
	545	119	664	21	4	3.76	20	5

ARKANSAS.

Scott	15	87	[1] 102	2	7	8.80	4	5
Pine Bluff	50	56	106	5	5	9.40	7	3
Lake Village	193	130	323	9	8	5.26	14	3
Stuttgart	65	56	121	4	6	8.20	7	3
Augusta	108	42	150	5	2	4.66	3	4
	431	371	802	25	28	6.60	35	18

[1] 52 of these collected by Dr. Henry Thibault.

NORTH CAROLINA.

Place.	Examined.			Number infected.			Types.	
	White.	Colored.	Total.	White.	Colored.	Per cent.	Tertian.	Estivo-autumnal.
Elizabeth City	401	411	812	27	41	8.37	58	10
Washington	256	210	466	18	17	7.51	24	11
Rockingham	18	1	19	6	.....	31.75	5	[1] 1
Edenton	368	.....	368	46	.....	12.50	34	12
Greenville	475	51	526	29	7	6.84	32	4
Knotts Island	515	.....	[2] 515	15	.....	2.91	12	3
New Bern	251	256	507	6	42	9.46	35	13
Roanoke Rapids	400	.....	400	55	.....	13.75	40	15
Total	2,684	929	3,613	202	107	8.552	240	69

SOUTH CAROLINA.

Columbia	14	53	[3] 67	1	7	12.3	5	3

[1] Estivo-autumnal and tertian mixed.
[2] 348 of these collected by Dr. G. T. Leonard and Dr. J. D. Maynard.
[3] 30 collected by Dr. W. A. Boyd.

It will be seen that the tertian type of infection prevailed. In North Carolina, of those persons who were found to have parasites in the blood, there were 1 estivo-autumnul (22.4 per cent) to 2½; tertian (77.6 per cent); in Arkansas, 1 estivo-autumnal (34 per cent) to 2 tertian (66 per cent); in Alabama, 1 estivo-autumnal (16 per cent) to 5 tertian (84 per cent); and in Columbia, S. C., 3 estivo-autumnal (37½ per cent) to 5 tertian (62½ per cent).

A further study of the North Carolina series according to age, sex, and color, shows that of 2,164 white persons, aged 1 to 19 years, inclusive, 175 (8.08 per cent) or about 1 in 12 showed parasites, and of the 860 colored, aged 1 to 19 years, inclusive (12.21 per cent), or about 1 in 8 showed parasites. Of the persons examined who were 20 years or over of age, parasites were found in the blood of 27 whites of the 516 examined, equal to (5.23 per cent), in round numbers 1 in 20, and in 2 of 67 colored (3 per cent), or 1 in 33.

In Arkansas of 210 white persons between the ages of 1 and 19 years, inclusive, 15 (7.14 per cent), or 1 in 14, showed malarial parasites on examination, and of the 140 colored, aged 1 to 19 years, 10 were found to harbor malarial parasites, equal to (7.14 per cent) 1 in 14, which is the same rate as those of the whites at the same ages. Of those 20 years of age and over, 10 of the 221 whites (4.52 per cent), equal to about 1 in 22, and 18 of the 231 colored (7.79 per cent), equal to 1 in 12½, were found to harbor parasites.

Comparing the parasitic indices of the two States, therefore, we find that in North Carolina the percentages were higher for those under 20 years of age, whereas those in Arkansas were higher at age of 20 years and over.

The tables here given show in detail the number examined and the number of infections occurring, according to age, sex, and color.

NORTH CAROLINA.

Age in years.	Persons examined.				Number found to have malarial parasites.							
					Estivo-autumnal.				Tertian.			
	White.		Colored.		White.		Colored.		White.		Colored.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
1–3	20	22	.....	2	1	.....	.....	.....	3	.....	.....	.....
4–5	18	25	9	17	.....	.....	.....	.....	1	2	1	1
6–9	272	272	116	145	7	[1]1	2	6	17	22	15	13
10–14	509	479	163	247	14	7	6	5	42	26	15	29
15–19	192	355	54	107	3	7	1	2	13	9	2	7
20–29	90	132	25	21	1	2	.....	.....	6	4	.....	1
30–39	61	69	4	10	.....	1	.....	.....	3	2	.....	.....
40 and over	100	64	5	2	2	1	.....	.....	2	2	.....	.....
Not stated [2]	1	2	.....	.....	.....	.....	.....	.....	1	.....	(3)	(3)
	1,263	1,420	376	551	28	19	9	13	88	67	33	51

ARKANSAS.

1–3	3	5	6	4	.....	.....	.....	2	.....	.....	.....	.....
4–5	8	6	3	3	1	.....	.....	.....	2	.....	1	.....
6–9	36	18	14	13	.....	1	.....	.....	1	.....	1	.....
10–14	60	23	32	15	1	1	1	1	4	1	.....	2
15–19	43	8	29	21	1	.....	1	.....	2	.....	.....	1
20–29	69	14	59	34	1	1	1	.....	3	1	5	.....
30–39	45	12	40	29	1	.....	3	1	1	1	3	3
40 and over	72	9	51	18	.....	.....	.....	.....	1	.....	2	.....
	336	95	234	137	5	3	6	4	14	3	12	6

[1] Mixed, Tertian and Estivo-autumnal. [2] History missing, 3. [3] 1 colored.

Economic aspect.—During my tours of investigation inquiries were made regarding sickness and deficiency of productive capacity of laborers employed in sawmills, on cotton plantations, etc., due to malaria. It is estimated that the average loss of time per man on account of sickness from this cause is in many places at least two weeks in the season June 1 to November 1.

Employers also increase their forces from 25 to 50 per cent during this season on account of lowered productive capacity of the employees.

Educational Propaganda.

Under the auspices of the State boards of health arrangements were made for delivering lectures to the public and to pupils at schools on the subject of malarial fevers, method of spread, and prevention. Lantern slides were sometimes used. Specimens of larvæ and pupæ were collected in the locality and demonstrated for purpose of differentiation between Anopheles and other varieties. In a few places classes of school children were taken out on a search for mosquito-breeding places and taught to identify the Anopheles larvæ.

These studies will be extended during the present year and it is hoped that the work will stimulate and excite an active interest in

adopting antimalarial measures. Already there are two places in North Carolina, one, Knotts Island, under the direction of the State board of health, and another, Roanoke Rapids, under the direction of Dr. T. W. M. Long, undertaking such work, which places will undoubtedly serve as a demonstration that the disease is preventable and can be controlled, if not eliminated, when a community desires to carry out intelligent prophylactic measures based on the principle that the Anopheles mosquito is the only transmitting agent of malaria from man to man.

Letters have been sent to State health officers of Alabama, Arkansas, Florida, Georgia, Mississippi, North Carolina, South Carolina, and Tennessee, requesting them to select localities in their respective States in which they desire surveys to be made. It was stated that on the part of the United States Public Health Service surveys of localities will be undertaken to ascertain—

1. Malarial index.
2. Breeding places of Anopheles.
3. Species of Anopheles present.
4. The most practicable measures to be immediately adopted for control.
5. Educational work, by means of lectures, lantern-slide demonstrations, etc.

Acknowledgments are due to the State health officers who cooperated in furnishing statistics, in having postal cards addressed, in the collection of data and material, and in many other ways; also to all physicians who replied to the circular postal cards, and to those who furnished and assisted in the collection of materials.

THE POLLUTION OF TIDAL WATERS.

ITS BEARING ON HEALTH AND THE IMPORTANCE TO THE STATE OF ITS CONTROL.[1]

By Hugh S. Cumming, Surgeon, United States Public Health Service.

It seems peculiarly appropriate that a subject involving the welfare of the tidal waters of Maryland should be discussed here where for years labored Prof. Brooks, who probably more than any other brought their actual and potential economic value to the attention of her citizens.

I have been honored by the request to discuss the subject, "The bearing of pollution of tidal waters on health and the importance to the State of the control of such pollution."

Not many years have passed since communities, as a matter of course, discharged their pollution untreated into the nearest stream

[1] Read before the Maryland Conservation Association at its first annual meeting, Baltimore, Md., Feb. 25, 1914.

without thought of consequences other than such gross pollution as would offend the eye and nose of their own residents. Many American cities continue to do this. Later, when modern science directed attention to the evil consequences of such action upon the health of cities lower down such streams, communities counted themselves fortunate when they could with apparent impunity discharge their sewage into mother ocean or one of her branches as carelessly as a housewife empties her laundry water on the ground.

Even later, when the rapid growth of our American cities and the increase of sewerage systems created intolerable conditions, such as formerly existed in the basin of Baltimore Harbor, the measures for prevention were directed rather toward abating disgusting flotsam and putrefactive gases and odors than toward the protection of the public health.

As a nation we Americans have from the earliest time until recently been prodigal in our waste of resources, our minerals, our food supply, and, most important of all, our health.

This is a time of awakening. We are realizing the value of health and lives even from a monetary standpoint, and this sanitary awakening is due to the advances of science and to the able work of such men as Dr. Welch and Dr. Fulton, of your State, in applying this knowledge to the health of the State.

The Extent and Nature of Pollution of Streams.

What is meant by pollution? It is the result of the introduction of sewage, which is the waste from houses, streets, and factories. Average sewage contains 999 parts of water to 1 part of solids. About one-half of this one part consists of mineral matters and one-half of organic matters capable of decomposition.

About three-fourths of the mineral matters are in a dissolved state. Of the organic matter, with which we are most interested from a sanitary point, about one-half, or about 200 parts per million of total sewage, is in solution, the other half in suspension. Basing our estimate either on the average reported by Fuller for 10 cities or on the analyses of Phelps and Winslow, which indicate that these impurities are equivalent to from 42.3 to 46 tons of dry solid material per year per 1,000 inhabitants, we may realize the quantity of pollution from communities of any size.

Danger of Pollution.

Not all of this pollution is directly dangerous, but sewage includes in addition to billions of other intestinal organisms those of typhoid fever and other water-borne diseases. Many persons for years after they have recovered continue to discharge the organism causing

typhoid fever while others who apparently have never been ill carry and distribute these germs for years.

Such pollution is called infectious pollution, and all sewers are either constantly discharging such pollution or there is the danger of their so doing.

Changes in Sewage After Entering Stream—"Self Purification."

The important question arises as to what becomes of these solid and liquid organic constituents of sewage.

If sewage be discharged unscreened or untreated into a stream, its surface will hold large and small masses of feces, grease, paper, and other things lighter than water or buoyed by gases. The water varies from the turbid, greasy, slate color of fresh sewage to the almost black, foul smelling, bubbling waters of stale sewage.

The future changes in sewage will now depend upon the amount of free or dissolved oxygen in the stream, for the sewage will already have exhausted nearly all of the free oxygen contained in its waters.

Whatever the intermediate steps may be, the ultimate disposition of the organic compounds is a breaking up into stable, inoffensive forms by means of oxidation. These processes are really a slow combustion. If there be sufficient oxygen present in contact with the organic matter, some will be directly oxidized, the action of the bacterial life usually present will further oxidize another portion, and the process will proceed without foul odors.

In the absence of sufficient oxygen the action of the putrefactive organisms will result in producing offensive, unstable compounds which must be finally oxidized.

The final products of all these processes are water, carbon dioxide, and ammonia, which further oxidizes to nitrous and nitric acid, these acids finally uniting with alkalies to form nitrites and nitrates. During this process of oxidation many of the dangerous intestinal organisms are being destroyed, for they are not in their natural environment, but others more resistant continue to live for a time dependent upon local conditions of oxidation, temperature, and possibly antagonistic normal bacterial and animal forms in the water.

The Essential Factors in the Self Purification of Polluted Waters.

The two essential factors in the self purification of polluted waters are oxygen and time. So far, therefore, as nuisance from appearance and odors is concerned, communities may freely discharge sewage into a stream if it, first, be treated to prevent floating or accumulating masses; second, if the current be enough to carry it away; and, third, if the proportions of water to sewage be such as to furnish abundant dissolved oxygen. A proportion of 1 of sewage to 50 of stream water

is sufficient, but the dissolved oxygen content is the best index. Unfortunately, disease germs may at times survive until they reach the water intake of another city or shellfish layings.

Conditions Affecting Purification of Polluted Tidal Waters.

Now, in tidal waters there are quite different conditions. While in an encyclopædic sense "tidal waters" include all bodies of water affected by tides, for instance, such portions of rivers as are found at the intakes of Philadelphia and Wilmington, for our discussion we shall consider waters where land and sea waters meet as tidal waters. Conditions in such waters are unfavorable for sewage disposal because—

First. In place of a constant river current we have a slow, oscillating swing of the tides four times daily with four periods of quiescence at slack water.

The currents are variable, more rapid on top in the channel, less rapid at the bottom and sides. As the capacity of water to move solids varies with the sixth power of the velocity, we can realize what a degree of sedimentation must occur during the periods of quiescence.

While the river currents cause some net seaward movement, so little is gained in the 3-mile swing of each tide in Chesapeake Bay that according to the United States Coast and Geodetic Survey it takes 138.4 days on the average for a floating particle, or 103.8 days for one following the channel, to travel from Pooles Island to Point Lookout.

Second. The transporting power of a river for solids in suspension is decreased by the presence of sea water; therefore, sewage discharged into tidal waters will deposit more solids than would be deposited in land water; consequently more putrefactive changes take place in the bottom mud. Roughly speaking, sea water deposits its suspended matter 10 or 12 times more rapidly than land water.

Third. Sea water contains much less available dissolved oxygen than unpolluted land water and reaeration is less rapid.

Fourth. The odors resulting from putrefactive changes following sedimentation and the lack of oxygen are more offensive than in land waters.

Finally, available evidence goes to show that typhoid germs will live for a considerable length of time in sea water or brackish water.

Summarizing, then, we find in tidal waters (*a*) comparatively concentrated areas of pollution, (*b*) decreased destruction by oxidation, (*c*) increased nuisance from putrefaction in consequence, and (*d*) not much difference in viability of disease germs.

The important factor of degree of dilution varies, of course, with each community.

Pollution by Industrial Wastes.

In addition to these ordinary wastes from our cities, streams and tributaries are frequently polluted by the wastes of our great industries.

Although this pollution, as a rule, is of less sanitary significance, it is often a serious factor in the general problem because of its large volume and concentrated nature.

Moreover, its treatment and disposal often present unusual difficulties which are further aggravated by the fact that the costs must be borne by the manufacturers themselves, who derive little or no benefit from such treatment.

This is an aspect of the question which has long attracted the attention of our more progressive State authorities, but which, nevertheless, remains one of our great problems for future solution.

Bearing of Sewage Pollution upon Health.

Now, let us discuss the bearing of sewage pollution upon health. As Fuller expresses it—

> There are two principal nuisances which are conspicuously due to sewage. The first is caused by conditions that are offensive to the sight and smell. The second class of nuisance is associated with the disease germs contained in sewage and which are transmitted to neighboring communities through the water of the stream into which the sewage is discharged or through shellfish.

The first type of nuisance may be dismissed in a few words, for it would be an insult to the intelligence and sense of decency of this Association to waste time in showing that no community should allow masses of garbage, offal, human dejecta, or other solid matter, recognizable as of sewage origin, to float in its harbor, disfigure its shores, or poison its atmosphere. Aside from the danger of disease thus produced, there is another objection, and Dr. Gilbert Fowler, of Manchester, England, has well expressed it as follows:

> But even more important than the direct and obvious ways in which the public health is affected by the polluted conditions of the harbor waters is the practically unconscious lowering of that sense of decency and cleanliness of living which must be maintained if the efforts of social reformers are to have any serious results.

Effect of the Pollution of Tidal Waters on Food Fish.

The economic question of the destruction of food fish or preventing them from going through the polluted waters to their spawning grounds up the rivers is important. The reduction of the dissolved oxygen below a certain standard by the presence of sewage or the deleterious action of a large amount of industrial wastes will render waters uninhabitable for fish.

The standards should be such that there is a minimum of disagreeable odors and appearance and that pollution is not too great for fish life.

The best index of this is the amount of dissolved oxygen present. A minimum of 50 to 70 per cent is a fair one.

Danger of Bathing in Polluted Waters.

The question of bathing in and near large communities is important. One of the greatest sources of pleasure and health to the residents in our tidewater cities is bathing on the water front or beaches in or near the cities. A great deal of wealth is brought to coast States by inland people who come to the shore resorts. Few persons bathe without getting some water into their mouths; consequently, bathing should be allowed only where the water is approximately as good as drinking water. Typhoid fever has undoubtedly been contracted in this way.

It is not practicable to maintain such a standard on the water front of our large communities, but it is practicable to protect near-by shores.

So far we have discussed the question in its local effect upon the health of the people. The pollution of tidal waters, however, has now assumed not merely State but National sanitary importance.

National Importance of the Pollution of Tidal Waters—Relation to Shellfish Industry.

From the time when our forefathers first landed on these shores and found oysters in our waters as abundant as were the buffalo on the plains and the wood pigeons in the forests, these delicious, nutritious shellfish have formed one of our most important foods and have furnished a livelihood to thousands of our citizens from Cape Cod to Biloxi.

Transported inland only by wagon in the earliest days the market for them has been extended by improved transportation facilities and refrigeration until now they may be eaten in the restaurants of Denver and are being carried alive and transplanted into the harbors of the Pacific coast.

In 1837 the first raw packing house was established in Baltimore. Connecticut, Rhode Island, New York, New Jersey, Maryland, and Virginia have always led in this great industry. Although Virginia as early as 1810 passed laws regulating the oyster trade and, owing in part to her present laws, now leads in this industry, as a whole our people, with characteristic American optimism and extravagance, have spent both their capital and legitimate income from this great bank of nature until Maryland, for example, has fallen in her production from 15,000,000 bushels of oysters in 1888 to about 3,500,000 in 1912.

In recent years, however, we have at last begun to take stock of all our resources and attempt to conserve them. I doubt not that very soon good laws and, more important, an intelligent public opinion will ultimately result in our shellfish becoming the great food supply and the great source of wealth so elequently described by Brooks.

Where Oysters Grow.

The oyster grows in tidal waters where the rivers bring down mineral and organic wealth and where are found the minute organisms which serve the oyster as food. This is the region where land and sea water meet and where, as we have seen, sedimentation of suspended solids, including sewage if it be present, is greatest.

The oysters obtain their food by sucking in large quantities of water, from which is strained, in their gill, everything in suspension. Each oyster thus probably passes through itself 10 or 12 gallons of water daily, and Prof. Brooks believed it probable that all the waters of the Susquehanna go through oysters before reaching the ocean. If disease organisms be present they, too, are drawn into the oyster; and while it is probably true that many are digested in its stomach, many are detained in the liquor and remain uninjured in the gills, so that in bacterial study we find many more organisms in the liquor than in the same amount of the water surrounding the oyster. Investigation has shown that not only do disease germs remain alive in the oyster shell after the oyster is removed from the water, but, at least in some cases, they rapidly multiply.

So long as the taking of oysters was a local affair and communities were small, the purchaser could know the situation and sanitary condition of the bed whence came his oysters, but with the increase of the polluted area, means for transportation, and widening of the market comes loss of identity. Once shipped, the oyster bears no mark by which the consumer can tell the presence or absence of infectious pollution; he must depend upon the shipper or the law for protection.

Now, the people of the country have been more or less aroused to the modes of conveyance of disease, especially typhoid fever. There has been a great deal written about oysters conveying disease, and already sentiment has abolished this food from many households.

Undoubtedly many cases of illness have been incorrectly attributed to shellfish infection, undoubtedly many oysters from safe layings have been infected in handling, and undoubtedly many articles written and reports made have been radical, superficial, and have seriously and unjustly injured a great food product; but it is equally true that cases of illness and deaths have been and are being caused by eating oysters from infected beds or from polluted waters, in which they are

placed to increase their bulk, and the danger is increasing with the increased amount of sewage in tidal waters near growing communities.

The condition is somewhat analogous to the milk industry. Many dealers would without legal compulsion sell pure milk, many through ignorance furnish dangerous milk, and a few will not scruple to sell anything for money.

A very large proportion of oysters are a perfectly safe food when bought by the consumer; a larger number are free from infection when taken from their layings. Many planters use intelligence in caring for oysters; some even employ bacteriologists so they may know the sanitary condition of their beds. But there remains a certain proportion of oysters which are taken from polluted beds and others which are plumped in polluted waters. These are dangerous to the lives and health of persons who use them.

We have learned or shall learn that we can not, as a Nation or State, now depend upon nature unaided for our food supply, whether it be vegetable, meat, oysters, or fish. Conditions in civilized countries are such that we must encourage and cultivate all of these sources of food if the supply is to be equal to the demand.

As the result of intelligent legislation in some States, thousands of dollars are being or have already been invested in increasing the supply of shellfish.

This great industry, already so important to the thousands of our people who catch and sell oysters, is of equal importance to the hundreds of thousands of citizens of other States, who should look upon them as a cheap, healthful, delicious food. The safeguarding of the industry itself and, what is more important, of the health of the people, demands the best thought and action of State and Federal Governments. On the one hand, the people throughout the whole country should know, when they buy shellfish, that they do not come from polluted beds, have been carefully handled, and that the municipal, State, and Federal Governments have at least exercised the supervision and care that are given to meat and other foods. On the other hand, our planters are entitled to know before they invest large sums of money just which layings are considered safe and which unsafe.

Regulation of Pollution of Tidal Waters.

Much can be done by municipalities regulating the handling of shellfish and a great deal by the States in regulating pollution and use of polluted waters.

Your own city of Baltimore has expended a vast sum to protect the layings of the upper bay, and New Jersey has a law forbidding sewage pollution, as a result of which about 150 of her communities have sewage-disposal plants which protect water supplies, bathing beaches, and shellfish layings.

Good judgment should be used in supervision. For instance, it would not be justifiable to make a large community expend vast sums to protect beds the actual and potential value of which is small.

On the other hand, valuable beds should be protected from pollution, even if State aid is required by small communities.

Such action would be as proper as State aid for good roads.

The question of allowing oysters to be grown in polluted waters and then transplanted into pure waters is an important one. It is true that oysters will eventually purify themselves, but such a transfer requires careful legal supervision, for it is fraught with dangerous possibilities.

The matter is often beyond State control. Only recently health authorities of a State reported to the Public Health Service an interstate traffic in oysters from beds polluted within the State which it was powerless to prevent.

The Federal Government controls interstate commerce and navigable waters, and the industry is one of national importance in the control of infectious disease.

By an act of Congress the Public Health Service was authorized to study the diseases of man and conditions influencing their propagation and spread, including sanitation and sewage and the pollution, direct or indirect, of the navigable waters of the United States. Under this act the Public Health Service is now planning a systematic study of the more important industrial wastes, of their effect upon navigable waters, and of remedial measures.

Under this same act the service has been, since last June, studying, as a type, the pollution of the Potomac River with reference to the danger from infectious disease, and this investigation will cover a cycle of one year. The Hygienic Laboratory of the Public Health Service has recently been making the bacteriological analyses of samples of oysters being collected by the Bureau of Chemistry of the Department of Agriculture.

There is now being outfitted the Public Health Service steamer *W. D. Bratton*. She is being equipped with a complete field laboratory. Sanitary bacteriologists, chemists, and, when necessary, sanitary engineers will be detailed on board. We shall extend our work to make a sanitary survey of all the tidal waters of Maryland and Virginia in which oysters grow, so that it will be known just which beds are safe, which are dangerous, actually or potentially, and suggestions will be made, when needed, as to means for remedying dangerous conditions.

The present state of uncertainty as to the safety of shellfish throughout the country is unjust both to the producer and to thousands of consumers, who are depriving themselves of one of the most delicious, cheapest, and easily digested foods nature has given us.

It is no idle dream to predict that with intelligent supervision—municipal, State, and Federal—of the pollution of tidal waters, with good State laws and intelligent public sentiment to encourage oyster growing, these great marine farms, fertilized as they are by rivers and the ocean itself, will produce crops which will rival the products of our mines and fields and pour millions of dollars into your coffers, while sanitary supervision of pollution will preserve our harbors for healthful pleasure and profit and prevent much sickness and death.

It is to the intelligent, hearty cooperative labors of such organizations as the Maryland Conservation Association that we look for such an aroused sanitary conscience as will protect our tidal waters from dangerous pollution and its consequences.

PREVALENCE OF DISEASE.

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring.

IN CERTAIN STATES AND CITIES.

SMALLPOX.

Indiana—Evansville.

Surg. Oakley, of the Public Health Service, reported by telegraph that during the week ended April 4, 1914, 14 cases of smallpox had been notified in Evansville, Ind.

Maryland—Baltimore.

Senior Surg. Carter, of the Public Health Service, reported by telegraph that during the period from March 28 to April 4, 1914, 16 cases of smallpox had been notified in Baltimore, Md., making a total of 264 cases reported since January 11, 1914.

Maryland—Frederick.

The State board of health of Maryland reported by telegraph April 1, 1914, that 1 case of smallpox had been notified in Frederick, Frederick County, Md.

Maryland—Hillsboro.

The State Department of Health of Maryland reported by telegraph April 8, 1914, that 2 cases of smallpox had been notified at Hillsboro, Caroline County, Md.

Minnesota—Duluth.

Acting Asst. Surg. Cheney, of the Public Health Service, reported by telegraph that during the week ended April 4, 1914, 3 cases of smallpox had been notified in Duluth, Minn.

Texas—Galveston.

Surg. Bahrenburg, of the Public Health Service, reported by telegraph that during the week ended April 3, 1914, 9 cases of smallpox, with 1 death, had been notified at Galveston, Tex., making a total of 51 cases, with 2 deaths, reported since February 6, 1914.

SMALLPOX—Continued.

Miscellaneous State Reports.

Places.	Cases.	Deaths.
Colorado (Mar. 1-31):		
Counties—		
Adams	2	
Boulder	8	
Denver	12	
El Paso	3	
Logan	11	
Morgan	1	
Otero	4	
Montrose	1	
Prowers	8	
Pueblo	3	
Weld	13	
Total	66	
Oregon (Feb. 1-28):		
Counties—		
Coos	2	
Multnomah	10	
Polk	4	
Umatilla	39	
Wasco	7	
Yamhill	3	
Total	65	
Pennsylvania (Jan. 1-31)		2
Texas (Feb. 1-28):		
Counties—		
Bosque	12	
Bowie	15	
Brazoria	2	
Brooks	13	
Burnet	75	
Collin	9	
Concho	12	
Dallas	101	2
Denton	14	
Eastland	6	
Ellis	5	
Erath	2	
Foard	2	
Galveston	11	1
Grayson	6	
Hale	6	
Hardin	16	
Henderson	18	
Hill	14	1
Hubbard	30	
Irion	12	1
Jim Wells	17	
Jones	29	
Kent	22	
Lee	1	
Llano	8	
McLennan	163	
Montague	2	
Navarro	6	
Palo Pinto	1	
Parker	2	
Rockwell	9	
Smith	29	
Fort Worth	78	
Throckmorton	2	
Travis	8	
Uvalde	14	2
Van Zandt	6	
Willacy	1	
Total	779	7

City Reports for Week Ended Mar. 21, 1914.

Altoona, Pa	1		Milwaukee, Wis	23	
Baltimore, Md	34		Muscatine, Iowa	19	
Boston, Mass	1		New Orleans, La	1	
Butte, Mont	5		Newport, R. I	1	
Chicago, Ill	2		Portsmouth, Va	3	
Cincinnati, Ohio	3		Providence, R. I	1	
Cleveland, Ohio	2		Racine, Wis	1	
Coffeyville, Kans	3	1	Richmond, Va	4	
Columbus, Ohio	3		St. Joseph, Mo	3	
Danville, Ill	2		San Francisco, Cal	4	
Hartford, Conn	1		Seattle, Wash	6	
Kansas City, Kans	21		Spokane, Wash	6	
La Crosse, Wis	2		Superior, Wis	1	
Lexington, Ky	4		Toledo, Ohio	6	
Los Angeles, Cal	1		Washington, D. C	5	
Lynchburg, Va	1		Zanesville, Ohio	3	
Massillon, Ohio	3				

TYPHOID FEVER.

Texas Report for February, 1914.

Places.	Number of new cases reported during month.
Texas:	
Dallas County—	
Dallas	4
Denton County	5
Denton	1
Galveston County—	
Galveston	2
Texas—Continued.	
Tarrant County—	
Fort Worth	30
Polytechnic	1
Travis County—	
Austin	1
Total	44

TYPHOID FEVER—Continued.

City Reports for Week Ended Mar. 21, 1914.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Ann Arbor, Mich.	2		Newark, N. J.	1	
Bayonne, N. J.	1		New Castle, Pa.	2	
Boston, Mass.	6		New Orleans, La.	2	
Buffalo, N. Y.	2		Oakland, Cal.	1	
Chicago, Ill.	7	2	Philadelphia, Pa.	6	3
Cincinnati, Ohio.	1	1	Pittsburgh, Pa.	2	3
Cleveland, Ohio.	3	1	Pittsfield, Mass.	1	
Dunkirk, N. Y.	7		Providence, R. I.	10	
Fall River, Mass.	2		Reading, Pa.	1	
Kansas City, Mo.	1		Sacramento, Cal.	2	1
Little Rock, Ark.	1		Schenectady, N. Y.	1	
Los Angeles, Cal.	6	1	South Omaha, Nebr.	2	
Lowell, Mass.	1		Toledo, Ohio.		1
Lynn, Mass.	1		Trenton, N. J.	2	
Manchester, N. H.	1		Washington, D. C.	2	
Milwaukee, Wis.	2	1	Wheeling, W. Va.	5	1
Moline, Ill.	2		Wilkes-Barre, Pa.	1	
Morristown, N. J.	1		Worcester, Mass.	1	
Nashville, Tenn.	1	1			

CEREBROSPINAL MENINGITIS.

Texas Report for February, 1914.

Places.	Number of new cases reported during month.	Places.	Number of new cases reported during month.
Texas:		Texas—Continued.	
Dallas County—		Hamilton County	1
Dallas	1	Total	4
Galveston County—			
Galveston	2		

City Reports for Week Ended Mar. 21, 1914.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Boston, Mass.	2	1	Milwaukee, Wis.	1	
Buffalo, N. Y.		1	New Orleans, La.	2	1
Chicago, Ill.	3	1	Pittsburgh, Pa.		1
Cincinnati, Ohio.	1		Rochester, N. Y.	1	1
Los Angeles, Cal.	2	1			

ERYSIPELAS.

City Reports for Week Ended Mar. 21, 1914.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Buffalo, N. Y.	4	1	New Bedford, Mass.		1
Binghamton, N. Y.	3		Passaic, N. J.	3	
Bridgeport, Conn.	1	1	Philadelphia, Pa.	21	5
Chicago, Ill.	26	4	Pittsburgh, Pa.	7	
Cincinnati, Ohio.	8		Providence, R. I.		1
Cleveland, Ohio.	7		Reading, Pa.	1	
Cumberland, Md.	1		Rochester, N. Y.	3	
Erie, Pa.	2		St. Joseph, Mo.		1
Harrisburg, Pa.	3		Schenectady, N. Y.	1	
Jersey City, N. J.	1		Trenton, N. J.		1
La Crosse, Wis.		2	Toledo, Ohio.		2
Lancaster, Pa.	1		Yonkers, N. Y.	1	
Milwaukee, Wis.	6		York, Pa.	1	1

PLAGUE.

Maintenance of a Squirrel-Free Zone.

During the week ended March 21, 1914, 110 acres of land in Alameda County, 269 acres in Stanislaus County, and 9½ miles of county road in San Joaquin County were treated with squirrel destructors.

Washington—Seattle—Plague Rat Found.

Surg. Lloyd, of the Public Health Service, reported by telegraph, April 7, 1914, the finding of a plague-infected rat at Seattle, Wash.

Rats Collected and Examined.

Places.	Week ended—	Found dead.	Total collected.	Examined.	Found infected.
California:					
Cities—					
Oakland	Mar. 21, 1914	46	491	396	.....
Berkeley	....do.....	2	159	122	.....
San Francisco	....do.....	18	1,342	930	.....

PNEUMONIA.

City Reports for Week Ended Mar. 21, 1914.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Ann Arbor, Mich	4	.....	Newport, Ky	1	1
Binghamton, N. Y	4	3	Pasadena, Cal	1	2
Braddock, Pa	1	.....	Philadelphia, Pa	57	113
Chicago, Ill	313	162	Pittsburgh, Pa	32	57
Cleveland, Ohio	30	17	Reading, Pa	1	3
Coffeyville, Kans	1	.....	Rochester, N. Y	2	10
Harrisburg, Pa	2	3	Schenectady, N. Y	2	4
Kansas City, Mo	4	17	South Bethlehem, Pa	1	1
Lancaster, Pa	2	.....	South Omaha, Nebr	1	.....
Los Angeles, Cal	17	7	Spokane, Wash	2	2
Manchester, N. H	3	3	Steelton, Pa	2	.....
New Castle, Pa	5	.....	Wilkinsburg, Pa	2	3

RABIES.

Washington—Seattle—Rabies in Animals.

Surg. Lloyd, of the Public Health Service, reported by telegraph that during the week ended April 4, 1914, 2 cases of rabies in dogs had been reported in Seattle, Wash.

TETANUS.

During the week ended March 21, 1914, tetanus was notified by cities as follows: Chicago, Ill., 1 death; Cleveland, Ohio, 1 case; Philadelphia, Pa., 1 case; Pittsburgh, Pa., 1 death.

TYPHUS FEVER.

New York—Ellis Island.

Surg. Williams, of the Public Health Service, reported by telegraph that on April 7, 1914, a case of typhus fever had been detected at Ellis Island Immigration Station among passengers from the steamship *Cameronia* from Glasgow.

SCARLET FEVER, MEASLES, DIPHTHERIA, AND TUBERCULOSIS.

Texas Report for February, 1914.

The State Board of Health of Texas reported that during the month of February, 1914, 174 cases of scarlet fever and 33 cases of diphtheria had been notified in Texas.

City Reports for Week Ended Mar. 21, 1914.

Cities.	Population, United States census, 1910.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Over 500,000 inhabitants:										
Baltimore, Md	558,485	226	32	2	27	.....	18	3	24	34
Boston, Mass	670,585	245	53	2	41	.....	142	2	52	25
Chicago, Ill	2,185,283	889	201	21	81	2	121	7	245	94
Cleveland, Ohio	560,663	164	42	5	26	.....	19	2	25	11
Philadelphia, Pa	1,549,008	674	52	9	432	1	89	6	68	64
Pittsburgh, Pa	533,905	208	17	3	31	2	110	5	42	17
From 300,000 to 500,000 inhabitants:										
Buffalo, N. Y	423,715	192	16	.....	30	1	16	1	28	12
Cincinnati, Ohio	364,463	171	30	2	4	.....	12	1	32	27
Los Angeles, Cal	319,198	124	5	1	9	.....	15	.....	49	20
Milwaukee, Wis	373,857	133	31	.....	52	1	51	2	39	26
New Orleans, La	339,075	173	17	2	38	1	6	.....	20	13
San Francisco, Cal	416,912	173	11	.....	37	.....	15	.....	27	17
Washington, D. C	331,069	123	6	1	50	.....	8	.....	31	19
From 200,000 to 300,000 inhabitants:										
Jersey City, N. J	267,779	.....	15	.....	14	.....	13	.....	18	.....
Kansas City, Mo	248,381	98	4	.....	15	.....	8	1	3	3
Providence, R. I	224,326	80	14	3	17	.....	6	1	4	6
Rochester, N. Y	218,149	78	6	.....	58	.....	27	2	5	4
Seattle, Wash	237,194	61	4	.....	5	1	4	.....	.....	7
From 100,000 to 200,000 inhabitants:										
Bridgeport, Conn	102,054	39	6	.....	10	1	3	.....	2	2
Columbus, Ohio	181,548	78	1	.....	22	.....	5	.....	8	2
Fall River, Mass	119,295	49	10	3	1	.....	7	.....	7	3
Lowell, Mass	106,294	49	6	1	15	.....	1	.....	2	2
Nashville, Tenn	110,364	54	2	.....	.....	.....	.....	.....	4	9
Oakland, Cal	150,174	39	3	.....	14	.....	4	.....	7	3
Richmond, Va	127,628	65	2	.....	14	.....	5	.....	8	6
Spokane, Wash	104,402	.....	.....	.....	35	.....	.....	.....	3	2
Toledo, Ohio	168,497	57	3	1	6	.....	9	.....	14	7
Worcester, Mass	145,986	54	1	1	9	1	5	.....	6	2
From 50,000 to 100,000 inhabitants:										
Altoona, Pa	52,127	19	1	.....	.....	.....	3	.....	.....	3
Bayonne, N. J	55,545	.....	.....	.....	7	.....	5	.....	6	.....
Camden, N. J	94,538	.....	6	.....	14	.....	4	.....	6	.....
Erie, Pa	66,525	23	5	.....	5	.....	1	.....	2	.....
Harrisburg, Pa	64,186	29	.....	.....	21	.....	17	.....	2	3
Hartford, Conn	98,915	.....	11	.....	5	1	2	.....	3	1
Hoboken, N. J	70,324	.....	.....	.....	31	.....	1	.....	13	.....
Johnstown, Pa	55,482	22	5	2	2	.....	2	.....	.....	.....
Lawrence, Mass	85,892	.....	2	1	.....	.....	4	.....	2	.....
Lynn, Mass	89,336	24	3	1	.....	.....	4	.....	4	1
Manchester, N. H	70,063	27	.....	.....	6	.....	6	1	2	2
New Bedford, Mass	96,652	40	.....	.....	1	.....	15	.....	5	5
Passaic, N. J	54,773	29	1	.....	11	.....	2	.....	2	1
Pawtucket, R. I	51,622	.....	2	1	.....	.....	7	.....	.....	1
Reading, Pa	96,071	29	3	.....	5	.....	17	.....	.....	2
St. Joseph, Mo	77,403	30	1	.....	.....	.....	1	.....	1	4
Schenectady, N. Y	72,826	21	2	.....	4	.....	10	2	1	1
Springfield, Ill	51,678	21	.....	.....	1	.....	.....	.....	.....	3
Springfield, Mass	88,926	36	2	1	.....	.....	1	.....	3	2
Trenton, N. J	96,815	41	.....	.....	1	.....	24	.....	7	3
Wilkes-Barre, Pa	67,105	29	3	1	104	.....	13	.....	6	.....
Yonkers, N. Y	79,803	18	6	2	12	1	10	.....	10	.....
From 25,000 to 50,000 inhabitants:										
Atlantic City, N. J	46,150	11	1	.....	3	.....	4	.....	2	.....
Binghamton, N. Y	48,443	16	.....	.....	66	.....	.....	.....	.....	.....
Brookline, Mass	27,792	.....	4	.....	3	.....	.....	.....	.....	.....
Butte, Mont	39,165	.....	.....	.....	2	.....	.....	.....	6	3
Chelsea, Mass	32,452	11	2	.....	15	.....	12	.....	3	1

SCARLET FEVER, MEASLES, DIPHTHERIA, AND TUBERCULOSIS—Contd.

City Reports for Week Ended Mar. 21, 1914—Continued.

Cities.	Population, United States census, 1910.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 25,000 to 50,000 inhabitants—Continued.										
Danville, Ill.	27,871	9	2	.....	2	.....	2	.....	.....	2
East Orange, N. J.	34,371	.....	5	.....	33	.....	5	.....	.....	.....
Fitchburg, Mass.	37,826	11	.....	1	1	.....	6	1	3	.....
Haverhill, Mass.	44,115	18	.....	.....	1	.....	6	.....	1	1
La Crosse, Wis.	30,417	10	2	.....	.....	.....	2	.....	.....	1
Lancaster, Pa.	47,227	.....	.....	.....	.....	.....	4	.....	1	.....
Lexington, Ky.	35,099	18	1	.....	21	.....	2	.....	.....	2
Little Rock, Ark.	45,941	25	.....	.....	100	.....	.....	.....	1	.....
Lynchburg, Va.	29,494	15	.....	.....	1	.....	1	.....	.....	.....
Malden, Mass.	44,404	16	1	.....	4	.....	8	.....	.....	.....
Newcastle, Pa.	36,280	9	.....	.....	.....	.....	3	.....	.....	.....
Newport, Ky.	30,309	10	.....	.....	.....	.....	4	.....	4	4
Newport, R. I.	27,149	4	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.	39,806	8	1	.....	19	.....	6	.....	1	.....
Niagara Falls, N. Y.	30,445	10	2	.....	.....	.....	.....	.....	.....	1
Norristown, Pa.	27,875	10	.....	.....	24	.....	9	.....	.....	2
Orange, N. J.	29,630	16	5	.....	35	.....	6	.....	1	1
Pasadena, Cal.	30,291	15	.....	.....	2	.....	1	.....	6	1
Pittsfield, Mass.	32,121	8	.....	.....	1	.....	2	.....	2	.....
Portsmouth, Va.	33,190	14	2	.....	.....	.....	5	.....	.....	2
Racine, Wis.	38,002	12	2	.....	.....	.....	4	.....	.....	.....
Sacramento, Cal.	44,696	9	1	.....	2	.....	.....	.....	2	2
San Diego, Cal.	39,578	.....	.....	.....	.....	.....	.....	.....	3	3
South Omaha, Nebr.	26,259	8	1	.....	.....	.....	.....	.....	1	.....
Superior, Wis.	10,384	7	.....	.....	.....	.....	14	.....	.....	.....
Taunton, Mass.	34,259	19	.....	.....	2	.....	6	.....	1	3
Waltham, Mass.	27,834	11	.....	.....	5	.....	2	.....	1	1
West Hoboken, N. J.	35,403	.....	1	.....	.....	.....	3	.....	1	.....
Wheeling, W. Va.	41,641	14	.....	.....	5	.....	.....	.....	2	2
York, Pa.	44,750	.....	2	.....	2	.....	2	.....	3	.....
Zanesville, Ohio	28,026	.....	2	.....	2	.....	2	.....	1	.....
Less than 25,000 inhabitants:										
Alameda, Cal.	23,383	7	1	.....	4	.....	.....	.....	.....	1
Ann Arbor, Mich.	14,817	9	1	.....	.....	.....	.....	.....	5	.....
Beaver Falls, Pa.	12,191	1	.....	.....	.....	.....	6	1	1	.....
Bennington, Vt.	8,698	2	.....	.....	.....	.....	1	.....	.....	.....
Braddock, Pa.	19,357	.....	.....	.....	3	.....	2	.....	.....	.....
Cambridge, Ohio	11,327	1	.....	.....	1	.....	.....	.....	.....	.....
Clinton, Mass.	13,075	13	.....	.....	.....	.....	.....	.....	.....	1
Coffeyville, Kans.	12,687	.....	.....	.....	22	2	.....	.....	.....	.....
Concord, N. H.	21,497	8	.....	.....	1	.....	.....	.....	.....	.....
Cumberland, Md.	21,839	6	1	.....	7	.....	9	.....	2	.....
Dunkirk, N. Y.	17,221	7	.....	.....	.....	.....	.....	.....	.....	.....
Harrison, N. J.	14,498	4	.....	.....	.....	.....	1	.....	2	.....
Kearny, N. J.	18,659	4	.....	.....	11	.....	1	.....	.....	1
Marinette, Wis.	14,610	4	.....	.....	.....	.....	1	.....	.....	.....
Massillon, Ohio	13,879	5	.....	.....	.....	.....	.....	.....	.....	.....
Medford, Mass.	23,150	5	.....	.....	1	.....	8	.....	.....	.....
Moline, Ill.	24,199	6	2	.....	.....	.....	1	.....	.....	.....
Montclair, N. J.	21,550	10	.....	.....	48	.....	3	.....	4	2
Morristown, N. J.	12,507	8	1	1	.....	.....	.....	.....	2	.....
Muscatine, Iowa.	16,178	.....	.....	.....	.....	.....	.....	.....	.....	1
Nanticoke, Pa.	18,877	8	1	.....	5	.....	1	.....	.....	.....
Newburyport, Mass.	14,949	3	.....	.....	.....	.....	1	.....	.....	.....
North Adams, Mass.	22,019	3	.....	.....	.....	.....	1	.....	.....	.....
Northampton, Mass.	19,431	7	.....	.....	.....	.....	1	.....	1	1
Palmer, Mass.	8,610	4	.....	.....	.....	.....	.....	.....	.....	.....
Palo Alto, Cal.	4,486	.....	.....	.....	.....	.....	.....	.....	1	.....
Plainfield, N. J.	20,550	6	.....	.....	2	.....	4	.....	1	.....
Pottstown, Pa.	15,599	7	.....	.....	.....	.....	1	.....	.....	.....
Rutland, Vt.	13,546	8	.....	.....	.....	.....	2	.....	.....	.....
Saratoga Springs, N. Y.	12,693	5	.....	.....	.....	.....	.....	.....	.....	.....
South Bethlehem, Pa.	19,973	4	.....	.....	6	.....	.....	.....	2	.....
Steelton, Pa.	14,246	1	.....	.....	1	.....	2	.....	.....	1
Wilkinsburg, Pa.	18,924	12	.....	.....	1	.....	13	1	1	.....
Woburn, Mass.	15,308	3	.....	.....	.....	.....	.....	.....	.....	.....

IN INSULAR POSSESSIONS.

HAWAII.

Examination of Rats and Mongoose.

Rats and mongoose have been examined in Hawaii for plague infection as follows: Honolulu, week ended March 14, 1914, 329; Hilo, week ended March 7, 1914, 2,629. No plague-infected animal was found.

PHILIPPINE ISLANDS.

Cholera—Plague Rats—Manila.

During the week ended February 21, 1914, 3 cases of cholera with 3 deaths were notified in Manila.

Cholera has almost disappeared from Manila and the Island of Luzon. The disease persists, however, in the Province of Capiz.

Bacteriological examination of the 65 rats referred to in a previous report as having been found at 206 Calle San Juan Luna, Manila, has resulted positively for plague.[1]

PORTO RICO.

Examination of Rats and Mongoose.

During the week ended March 14, 1914, 657 rats, 250 mice, and 3 mongoose were examined in Porto Rico for plague infection. No plague-infected animal was found.

[1] Public Health Reports, Vol. 29, No. 12, Mar. 20, 1914, p. 706.

FOREIGN REPORTS.

AUSTRALIA.

Smallpox—New South Wales.

During the period from February 1 to 24, 1914, 16 cases of smallpox were notified in New South Wales. Of these 10 cases occurred in the metropolitan area of Sydney. In addition to the 16 cases referred to 5 persons who were sent to the quarantine station as contacts were found on arrival there to be suffering from smallpox.

CHINA.

Cholera—Plague—Plague Rats—Hongkong.

During the three weeks ended February 28, 1914, 1 fatal case of cholera and 30 cases of plague with 25 deaths were notified at Hongkong. On April 1, 1914, 48 cases of plague were notified at Hongkong and during the week ended April 7, 1914, 91 cases.

During the two weeks ended February 28, 1914, 6,691 rats were examined at Hongkong for plague infection. Of this number 19 were found to be plague infected.

Plague-Infected Rats—Shanghai.

During the week ended February 28, 1914, 287 rats were examined at Shanghai for plague infection. Two plague-infected rats were found.

CUBA.

Communicable Diseases—Habana.

Communicable diseases have been notified in Habana as follows:

TEN DAYS ENDED MAR. 20, 1914.

Diseases.	New cases.	Deaths.	Remaining under treatment.
Diphtheria	17	2	13
Leprosy	1	.....	265
Malaria	1	.....	[1] 9
Measles	77	.....	189
Paratyphoid fever	2	.....	7
Plague	.....	.....	2
Scarlet fever	23	.....	22
Typhoid fever	9	.....	36
Varicella	16	.....	19

[1] From the interior of the Republic.

ECUADOR.

Plague—Yellow Fever.

Plague and yellow fever were notified in Ecuador during the month of February, 1914, as follows:

Plague.—Guayaquil, 16 cases with 11 deaths.

Yellow fever.—Guayaquil and vicinity (Milagro), 9 cases with 4 deaths.

JAPAN.

Plague—Taiwan.

During the month of February, 1914, 32 cases of plague with 28 deaths were notified at Kagi, island of Taiwan (Formosa).

Typhus Fever—Tokyo.

From the beginning of the outbreak, March 20, 1914, to April 5, 1914, 1,750 cases of typhus fever were notified at Tokyo, Japan.

JAVA.

Status of Plague.

Plague has been notified in east Java as follows:

MONTH OF JANUARY, 1914.

Districts.	New cases.	Deaths.	Districts.	New cases.	Deaths.
Kediri	208	192	Surabaya	42	41
Madioen	130	115			
Malang	766	657	Total	1,146	1,005

MEXICO.

Epidemic Smallpox—Tamaulipas.

Smallpox in epidemic form was reported April 2, 1914, in the vicinity of Cruz, State of Tamaulipas, Mexico.

PERU.

Status of Plague.

Plague has been notified in Peru as follows:

FEB. 16-22, 1914.

Places.	New cases.	Remaining.	Places.	New cases.	Remaining.
Callao	2	2	Lima (country)		3
Catacaos		4	Mollendo	2	3
Chiclayo	6	15	Salaverry	3	2
Guadalupe		5	San Pedro		3
Lima (city)	3	2	Trujillo	12	22

TRINIDAD.

Yellow Fever—Labrea.

A case of yellow fever was notified at Labrea, island of Trinidad, March 27, 1914.

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX.

Reports Received During Week Ended Apr. 10, 1914.

CHOLERA.

Places.	Date.	Cases.	Deaths.	Remarks.
India:				
Madras	Feb. 15-28	4	1	
Philippine Islands:				
Manila	Feb. 15-21	3	3	
Provinces—				
Capiz	Feb. 21			Still present.

YELLOW FEVER.

Ecuador:				
Guayaquil	Feb. 1-15	5	1	
Milagro	Feb. 1-28	4	3	
Trinidad:				
Labrea	Mar. 27	1		

PLAGUE.

China:				
Amoy				Mar. 7, still present.
Hongkong	Feb. 15-28	18	13	Apr. 1, cases, 48; Apr. 9, cases, 91.
Ceylon:				
Colombo	Feb 8-21	26	26	
Dutch East Indies				Total, Jan. 1-31: Cases, 1,146; deaths, 1,005.
Java—				
Provinces—				
Kediri	Jan. 1-31	208	192	
Madioen	do	130	115	
Malang	do	766	657	
Surabaya	do	42	41	
Ecuador:				
Guayaquil	Feb. 1-28	16	11	
India:				
Bombay	do	51	42	
Karachi	Feb. 22-28	45	37	
Rangoon	Jan. 1-31	111	108	Including previous report.
Indo-China:				
Saigon	Feb. 10-16	1	1	
Japan:				
Taiwan—				
Kagi	Feb. 1-28	32	28	
Mauritius	Jan. 16-22	4	3	Total year 1913: Cases, 305; deaths, 183.
Peru:				
Arequipa—				
Mollendo	Feb. 16-22	2		
Callao—				
Callao	do	2		
Lambayeque—				
Guadalupe	do	6		
Libertad—				
Salaverry	do	3		
Trujillo	do	12		
Lima—				
Lima	do	3		

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received During Week Ended Apr. 10, 1914—Continued.

SMALLPOX.

Places.	Date.	Cases.	Deaths.	Remarks.
Australia:				
New South Wales				Feb. 1-24, 10 cases in the metropolitan area of Sydney and 6 cases at Singleton.
Victoria—				
Melbourne				At Point Napean quarantine station, Jan. 19, 1 case from F. M. S. Caledonian from Noumea via Sydney.
Brazil:				
Rio de Janeiro	Feb. 15-28	54	10	
Canada:				
Montreal	Mar. 22-28	9		
Toronto	do	4		
Winnipeg	Mar. 15-21	4		
China:				
Dairen	Feb. 8-14	4	2	
Hankow	Feb. 15-28	2		
Mukden	Mar. 8			Present.
Shanghai	Feb. 23-Mar. 1	3	3	
Egypt:				
Alexandria	Mar. 5-11	3	1	
Cairo	Feb. 19-Mar. 4	21	8	
Port Said	do	3	1	
France:				
Marseille	Feb. 1-28		15	
Nantes	Mar. 8-14	1		
Paris	Feb. 22-Mar. 7		15	
St. Etienne	Mar. 1-14	1		
Great Britain:				
Liverpool	Mar. 15-21	1		From a vessel.
Grenada				3 cases reported Mar. 18 were in St. Andrews Parish, 20 miles from St. Georges.
India:				
Bombay	Feb. 15-28	29	12	
Calcutta	Feb. 8-14		14	
Karachi	Feb. 15-28	2		
Madras	do	11	6	
Rangoon	Jan. 1-31	1		
Japan:				
Nagasaki				Nagasaki, Mar. 8, 3 cases.
Italy:				
Genoa	Mar. 1-15	1	1	
Mexico:				
Tampico	Feb. 1-24	22	16	
Cruz	Apr. 2			Epidemic in vicinity.
Morocco:				
Casablanca	Mar. 7			Present.
Peru:				
Callao	do			Improving.
Lima	do			Do.
Russia:				
Moscow	Feb. 15-Mar. 7	27	5	
Servia:				
Belgrade	Feb. 22-Mar. 7	14	1	
Spain:				
Madrid	Feb. 1-28		11	
Seville	do		1	

Reports Received from Dec. 27, 1913, to Apr. 3, 1914.

CHOLERA.

Austria-Hungary:			
Bosnia-Herzegovina—			
Brod	Nov. 13-18	2	
Kostjnica	do	1	
Novigrad	Oct. 26-Nov. 5	1	
Sjekocac	Nov. 6	1	
Travnik, district	Dec. 10-16	6	
Vranduk	Nov. 20	1	
Zenica	Oct. 20-Nov. 19	9	2

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from Dec. 27, 1913, to Apr. 3, 1914—Continued.

CHOLERA—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Austria-Hungary—Continued.				
Croatia-Slavonia—				
Pozenga	Nov. 18–Dec. 1	2		
Syrmien—				
Adasevci	do	6	2	
Semlin	do	1	1	
Vitrovica—				
Dobrovic	do	2	2	
Hungary				Total, Sept. 1–Dec. 29: Cases, 729; deaths, 372; Dec. 29, free.
Bacs-Bodrog, district	Nov. 9–Dec. 29	52	31	
Jasz-Nagy-Kun-Szolnok—				
Szolnok	Nov. 9–15	2	2	
Maramaros	Nov. 30–Dec. 6	1	1	
Pest Pilis—				
Soroksar	Nov. 9–22	2	1	
Szaboles—				
Nyiregyhaza	Nov. 9–15	1	1	
Temes—				
Varasliget	do		1	
Torontal	Nov. 9–Dec. 13	27	19	
Ung—				
Jasza	Nov. 9–15	1	1	
Ceylon:				
Colombo	Nov. 9–Jan. 17	33	19	
China:				
Hongkong	Nov. 9–Feb. 14	3	1	
Dutch East Indies:				
Java—				
Batavia and Tanjong Priok.	Nov. 9–Feb. 14	47	35	
Do	Jan. 18–24	1	1	
Samarang	Nov. 30–Dec. 27	47	25	
Sumatra—				
Padang	Dec. 1–Jan. 3	70	50	
India:				
Bassein	Feb. 1–7	1	1	
Bombay	Nov. 10–Feb. 21	20	9	
Calcutta	Nov. 9–Feb. 14		576	
Madras	Nov. 16–Feb. 14	7	4	
Negapatam	Jan. 4–Feb. 7	47	28	
Rangoon	Nov. 1–Dec. 31	5	1	
Do	Jan. 1–31	2	1	Feb. 1–4: 11 cases with 8 deaths
Indo-China:				
Laos (Shan States)	Jan. 1–10	10		Along the upper Mekong River.
Saigon	Jan. 13–26	2		
Philippine Islands:				
Manila	Nov. 9–Feb. 14	81	52	Total, Aug. 23–Jan. 24: Cases, 186; deaths, 124. Third quarter, 1913: Cases, 14; deaths, 6. Jan. 3, 1 fatal case on s. s. Sigismund from Rabal, New Guinea. At the necropsy pathological lesions of cholera and beriberi were found.
Provinces				Total, Aug. 23–Dec. 27: Cases, 148; deaths, 94.
Bulacan—				
Bulacan	Dec. 14–20			Present in vicinity.
Meycauayan	do			Present.
Capiz				Total, Dec. 17–23: Cases, 26; deaths, 18.
Banga	Dec. 17–20			Present.
Capiz	Jan. 28			Do.
Calivo	Dec. 17–Jan. 24			1 death daily.
New Washington	do			Present.
Cavite—				
Santa Cruz	Nov. 13–19			Do.
Cebu—				
Cebu	do			Do.
Opon	Nov. 19	1		On Mactan Island.
Pampanga	Dec. 7–Jan. 28			Present in Guagua, Macabebe, San Fernando, and other places.
Pangasinan	Dec. 19–29			Present in Dagupan, Lingayen, San Carlos, and Urdaneta.

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from Dec. 27, 1913, to Apr. 3, 1914—Continued.

CHOLERA—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Philippine Islands—Continued.				
Provinces—Continued.				
Rizal—				
Las Pinas	Dec. 19–29	1		
Pasig	Nov. 19			Present.
Pateros	Jan. 28			Do.
Rizal	do			Do.
Roumania				Total, Nov. 14 to Dec. 7: Cases, 18; deaths, 15.
Russia:				
Bessarabia—				
Ismail	Oct. 26–Nov. 8	6	1	
Ekaterinoslav	do	1		
Kherson	do	6	9	
Taurida—				
Dneiper district	do	1	2	
Servia				Nov. 10–24; 8 cases with 2 deaths in the districts Podrigne and Pojarevatz.
Siam:				
Bangkok	Nov. 2–Jan. 24		99	
Straits Settlements:				
Singapore	Nov. 2–Jan. 17	19	17	
Turkey in Asia:				
Aivali	Jan. 10–23	9	6	
Beirut	Dec. 23	2	1	From among troops on the s. s. Bahr Amer from Rodosto.
Smyrna	Dec. 16–Jan. 8	11	4	
Trebizond	Dec. 9–Jan. 24	22	16	Dec. 9–16; 6 cases among troops from s. s. Guldjemal. Jan. 17, 1 case in the city.
Turkey in Europe:				
Constantinople	Nov. 25–Feb. 15	141	56	Total, Aug. 2–Feb. 15: Cases, 216; deaths, 96.
Dardanelles	Jan. 9–20	10	9	
Gallipoli	Jan. 1–3	2	2	
Pera	Jan. 3–10	5		
Rodosto	Dec. 21–Jan. 9	22		

YELLOW FEVER.

Brazil:				
Bahia	Nov. 23–Feb. 28	9	13	
Ceara	Nov. 1–30		2	
Ecuador:				
Guayaquil	Nov. 1–Dec. 31	9	6	
Do	Jan. 1–31	7	2	
Milagro	do	2	1	
Naranjito	do	3	2	
Mexico:				
Merida	Dec. 10–11	1	1	From Campeche.
Do	Jan. 4–10	1	1	Do.
Southern Nigeria:				
Lagos	Oct. 20–Dec. 28	5	1	Among Europeans from a vessel. Feb. 26, present.
Omitsha	Jan. 24	1		
Togo:				
Lome	Sept. 12	1		
Trinidad:				
Brighton	Dec. 30	1		Total, Nov. 22–Dec. 30: Cases, 10; deaths, 3, including previous reports.
Venezuela:				
Caracas				Feb. 28, 1 case.

PLAGUE.

Arabia:				
Debai	Mar. 7			Present.
Australia:				
Thursday Island Quarantine station.	May 21	5		Pestis minor from s. s. Taynan from Hongkong to Townville.

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from Dec. 27, 1913, to Apr. 3, 1914—Continued.

PLAGUE—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Azores:				
Terceira—				
Angra-Heroismo	Dec. 21		1	
Brazil:				
Bahia	Nov. 23–Feb. 21	25	10	
Pernambuco	Dec. 16–31		1	
Do	Jan. 1–15		1	
Rio de Janeiro	Nov. 16–22	1	1	
British East Africa:				
Kisumu	Sept. 12–Oct. 13	2		Jan. 14–Nov. 15, 1913: Cases, 20; deaths, 22.
Mombasa	Sept. 12–Dec. 15	31	16	Feb. 6–Dec. 15: Cases, 200; deaths, 173, including previous reports.
Nairobi	Sept. 12–Nov. 15	3	3	
Ceylon:				
Colombo	Jan. 25–Feb. 7	7	7	Septicemic. Jan. 25–Feb. 12: 11 deaths.
Kandy	do	1		From Colombo. Also septicemic.
Chile:				
Iquique	Nov. 9–Jan. 31	18	9	
Do	Jan. 11–Feb. 28	14	9	
China:				
Amoy	Feb. 18		5	Present in the island.
Hongkong	Nov. 2–Feb. 14	93	86	Mar. 25, 66 cases.
Shanghai	Oct 1–7	1		
Cuba:				
Habana	Mar. 5–26	5	1	
Dutch East Indies:				
Java				Total in East Java, year 1913: Cases, 11,218; deaths, 10, 556.
Provinces—				
Kebiri	Nov. 1–Dec. 31	547	481	
Madioen	do	151	140	
Malang	do	1,550	1,463	
Surabaya	do	93	95	
Ecuador:				
Babahoyo	do	1		
Duran	Dec. 1–31	1		
Do	Jan. 1–31	1	1	
Guayaquil	Nov. 1–Dec. 31	349	157	
Do	Jan. 1–31	55	21	
Manta	Dec. 1–31	8		
Milagro	Nov. 1–Dec. 31	2	1	
Naranjito	do	3	1	
Yaguachi	Nov. 1–30	2	2	
Do	Jan. 1–31	1	1	
Egypt				Jan. 1–Dec. 24, 1913: Cases, 654 deaths, 304. Jan. 1–Feb. 18: Cases, 15; deaths, 7.
Alexandria	Feb. 19	1	1	
Cairo	Feb. 13–22	2		
Port Said	Feb. 10	2	2	
Provinces—				
Assiout	Jan. 5	1	1	
Assouan	Dec. 10	1		
Do	Jan. 5	1	1	
Fayoum	Feb. 10	1		
Garbieh	Dec. 11	1		
Do	Jan. 15–17	7	2	
Minieh	Dec. 9–24	3	1	
Do	Jan. 8–29	2	2	
India				Total Jan. 1, 1913–Jan. 3, 1914: Cases, 238,198; deaths, 198,875. Jan. 4–31: Cases, 34,714; deaths, 28,061.
Bassein	Jan. 4–31	52	37	Total, Jan. 1, 1913–Jan. 3, 1914: Cases, 304; deaths, 283.
Bombay	Nov. 9–Feb. 21	177	152	
Calcutta	Nov. 2–Feb. 14		22	
Karachi	Nov. 9–Feb. 21	237	225	
Madras	Nov. 16–Feb. 14	5	3	
Moulmine	Jan. 4–24		18	Jan. 1, 1913–Jan. 3, 1914: Cases, 574; deaths, 576.
Rangoon	Oct. 26–Dec. 31	74	68	
Do	Jan. 1–Feb. 14	172	167	
Indo-China				Total Jan. 1–Dec. 31: Cases, 3,961; deaths, 3,742.
Saigon	Nov. 11–Jan. 26	14		

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from Dec. 27, 1913, to Apr. 3, 1914—Continued.

PLAGUE—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Japan				Total Jan. 1–Dec. 31: Cases, 27; deaths, 20; exclusive of Taiwan.
Kobe	Dec. 1–7	1		
Yokohama	Jan. 4–10	1	1	Total Sept. 19–Jan. 10: Cases, 22; deaths, 18.
Mauritius	Oct. 26–Jan. 8	82	54	Total Jan. 1–Nov. 27: Cases, 273; deaths, 163.
Morocco:				
Casablanca	Jan. 7	1	1	
El-Araish (Larache)	Sept. 17	1		Among the military.
New Caledonia:				
Bourail	Sept. 1–Oct. 14	8	2	In a school of the tribe of the Azaren.
Peru				Deaths not reported.
Ancachs—				
Casma	Feb. 9–15	2		Dec. 1–Feb. 8, present
Nepena	Nov. 1–Jan. 18			Do.
Arequipa—				
Mollendo	Dec. 1–Feb. 15	12		
Cajamarca—				
Contumaza	Jan. 19–24	12		Feb. 8, present.
Callao—				
Callao	Jan. 19–Feb. 15	5		
Lambayeque—				
Chiclayo	Dec. 1–Feb. 15	72		
Ferrenaje	Dec. 1–Feb. 8	18		
Guadalupe	Dec. 1–Feb. 15	15		Dec. 1–Feb. 8, present.
Pacasmayo	Jan. 25–Feb. 15	5		
Libertad—				
San Pedro	Dec. 1–Feb. 8	34		
Trujillo	Dec. 1–Feb. 15	61		
Lima	Dec. 1–Jan. 18	6		
Lima	Dec. 1–Feb. 15	45		
Pisco	Dec. 1–Jan. 18	2		
Monsefu	do	2		
Piura—				
Catacaos	Dec. 1–Feb. 15	13		
Piura	Dec. 1–Jan. 24	10		Feb. 8, present.
Philippine Islands:				
Manila	Nov. 23–Feb. 14	10	9	Third quarter, 1913: Cases, 2; deaths, 1.
Russia:				
Saratov	Feb. 11	1		
Ural, territory				Total Oct. 20–Nov. 10: Cases, 212; deaths, 170; and 2 fatal cases from Issum Tube.
Djakisabevsk district—				
Djumarta	Nov. 9–10	5	1	
Djantayu	Nov. 8–10	2	2	
Kizilu	Nov. 8	1	1	
Fourteenth village	Nov. 7–9	6		
Sarbas	Nov. 8–10	13	7	
Kaziljar district	Nov. 5–10	39	24	In Assaukurt, Baltchurek, Biskuduk, and Djamankuduk.
Lbistchensky district—				
Issum Tube	Oct. 20–Nov. 10	138	127	
Kaimikov	Nov. 4–10	6	6	
Siam:				
Bangkok	Nov. 2–Jan. 24		7	
Tripoli:				
Bengazi	Jan. 31			Present.
Turkey in Asia:				
Beirut	Dec. 10–23	2	2	
Jiddah	Feb. 2–Mar. 4	4	1	
Zanzibar	Dec. 31–Jan. 21	5	3	On s. s. Prasident from Dar-es-Salaam.

SMALLPOX.

Algeria:				
Departments—				
Algiers	Sept. 1–Dec. 31	10		
Constantine	Oct. 1–Dec. 31	15		
Oran	Sept. 1–Nov. 30	216		Feb. 1–28: Cases, 5; deaths, 4.

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from Dec. 27, 1913, to Apr. 3, 1914—Continued.

SMALLPOX—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Arabia:				
Aden	Nov. 25–Feb. 2	5	5	
Maskat	Nov. 30–Dec. 6	10		Dec. 20, present.
Matarah	Dec. 23–Jan. 10	9		Nov. 30, present; Feb. 14, still present.
Argentina:				
Buenos Aires	Nov. 1–30		1	
Rosario	Dec. 1–31	1		
Australia:				
New South Wales				Total July 1, 1913–Jan. 31, 1914: Cases, 1,078.
Sydney, metropolitan area				July 1, 1913–Jan. 8, 1914: Cases, 1,032.
Western Australia—				
Freemantle				Dec. 2: 1 fatal case on R. M. S. Malwa, from London via Port Said, Aden, and Colombo.
Austria-Hungary:				
Coastland—				
Trieste	Jan. 25–31	3		
Galicia	Feb. 15–21	1		
Lower Austria—				
Vienna	Jan. 4–24	6		
Moravia	Jan. 18–Feb. 21	5		
Silesia	Feb. 15–18	1		
Tyrol and Vorariberg	Nov. 23–Feb. 21	6		
Upper Austria	Dec. 14–Feb. 21	20		
Belgium:				
Liege	Mar. 1–7		6	
Brazil:				
Bahia	Nov. 23–Feb. 28	28		
Para	Dec. 1–Feb. 28	25	45	
Pernambuco	Nov. 1–Jan. 15		70	
Rio de Janeiro	Nov. 9–Feb. 7	402	73	
Canada:				
Manitoba—				
Winnipeg	Feb. 14–Mar. 20	11		
Ontario—				
Fort William	Feb. 24–Mar. 2	1		
Hamilton	Jan. 1–Feb. 28	23		
Ottawa	Dec. 7–Mar. 7	22		
Toronto	Dec. 7–Mar. 20	8	1	
Quebec—				
Montreal	Dec. 7–Mar. 21	66		
Quebec	Jan. 24–31	1		
Canal Zone:				
Panama				Nov. 1–30: Santo Tomas hospital, 1 case from a vessel from Callao.
Ceylon:				
Colombo	Nov. 30–Dec. 6	1		
China:				
Amoy	Dec. 14–Jan. 10			Present.
Antung	Jan. 4–Feb. 15	3		
Dairen	Dec. 7–17	6	1	
Hankow	Nov. 2–Jan. 24	12	1	
Hongkong	Dec. 14–Feb. 14	7	5	
Nanking	Jan. 24			Do.
Shanghai	Dec. 8–Feb. 22	11	10	Deaths among natives.
Tientsin	Nov. 9–15		1	
Ting Chow	Jan. 5			Epidemic, 130 miles from Amoy.
Tsing Tau	Jan. 15–31	2		
Tong An	Dec. 27			Present, 20 miles from Amoy.
Cuba:				
Sagua la Grande	Feb. 1–28	1	1	
Dutch East Indies:				
Java				Dec. 13–Feb. 7: 208 cases with 61 deaths in the western part, and 100 cases with 63 deaths in the interior.
Batavia	Nov. 27–Jan. 11	66	69	
Besoeki	Oct. 19–29	227	47	
Madioen	Oct. 19–28	36	12	
Surabaya	Oct. 28–Jan. 31	6		
Surakarta	Oct. 19–Dec. 6	481	91	

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from Dec. 27, 1913, to Apr. 3, 1914—Continued.

SMALLPOX—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Egypt:				
Alexandria	Nov. 26–Mar. 4	22	11	
Cairo	Nov. 19–Feb. 18	130	71	
Port Said	Dec. 3–Feb. 18	4	1	
France:				
Bordeaux	Mar. 8–14		1	
Marseille	Nov. 1–Jan. 31		98	
Nantes	Feb. 1–Mar. 7	3		
Nice	Nov. 1–Dec. 31	2		
Paris	Nov. 23–Feb. 14	19		
St. Etienne	Nov. 16–Feb. 15	11	4	
Germany				Dec. 7–Mar. 7: Cases, 19.
Berlin	Feb. 8–14	2		
Bremen	do	1		
Breslau	do	1		
Hamburg	Dec. 11–25	4		
Kehl	Jan. 1–31		1	
Lubec	Feb. 15–21	1		
Gibraltar	Dec. 1–Mar. 1	5		
Great Britain:				
Aberdeen	Feb. 22–Mar. 7	4	1	
Cardiff	Feb. 16–21	1		
Edinburgh	Mar. 1–7		1	
London	Jan. 18–Mar. 14	5		
Nottingham	Dec. 21–27	28		
Southampton	Feb. 2–28	1		
Greece				Jan. 28–Feb. 12: Present in the barracks at Athens and in the surrounding country.
Achaia and Elis, Province	Jan. 29			Present.
Piraeus	Jan. 18–Feb. 12	19	11	
Grenada	Mar. 18	3		
Guadeloupe:				
Pointe a Pitre quarantine station, Islet a Cosson.	Feb. 16–23	10	1	From among returned troops from s. s. Perou from Havre, via Bordeaux and Santander.
India:				
Bombay	Nov. 23–Feb. 1	49	23	
Calcutta	Nov. 2–Feb. 7		63	
Karachi	Nov. 2–Jan. 31	7	1	
Madras	do	21	5	
Indo-China:				
Saigon	Nov. 11–24	1	1	
Italy:				
Leghorn	Dec. 21–27	1		
Naples	Jan. 3	1		
Turin	Dec. 22–28	1		
Japan				Total Jan. 1–Dec. 31: Cases, 108; deaths, 39, exclusive of Taiwan.
Fukuoka ken	Dec. 1–31	2		
Nagasaki	Jan. 1–31	1		Feb. 1–Mar. 31: 12 cases, 2 deaths.
Tokyo	Nov. 1–Mar. 7	10		
Yokohama	Jan. 6–12	1	1	
Mauritius	Oct. 2–25	60	4	
Mexico:				
Acapulco	Dec. 6–Feb. 7		2	
Aguascalientes	Dec. 1 Mar. 15		93	
Chihuahua	Dec. 29–Feb. 1		10	
Durango	Apr. 1–May 31		77	
Guadalajara	Jan. 11–Feb. 14	89	46	
Imuris	Dec. 29–Jan. 4	5		
Juarez	Feb. 15–28		4	
Llano	Jan. 17	8		
La Paz	Jan. 16–22	3	1	
Mexico	Oct. 26–Dec. 27	94	27	
Monterey	Nov. 17–Mar. 8	4	4	
Salina Cruz	Jan. 18–24	1	1	
San Luis Potosi	Nov. 2–Jan. 24	4	7	
Tampico	Dec. 24–Mar. 10	200	58	
Vera Cruz	Dec. 6–Feb. 28	31	8	
Netherlands, The	Feb. 8–14	1	1	
New Zealand				Apr. 8, 1913, to Jan. 7, 1914: Cases, 2,000, including report, p. 2863, vol. 28.
Norway:				
Trondhjem	Nov. 1–Feb. 28	19		

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from Dec. 27, 1913, to Apr. 3, 1914—Continued.

SMALLPOX—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Peru:				
Callao	Jan. 26			Still epidemic.
Lima	do			Do.
Philippine Islands:				
Manila				Third quarter, 1913: Cases, 15.
Portugal:				
Lisbon	Nov. 16–Feb. 28	19		
Russia:				
Moscow	Dec. 14–Feb. 14	19	4	
Odessa	Nov. 16–Feb. 14	12	2	
Riga	Feb. 22–28	7		
St. Petersburg	Nov. 23–Feb. 28	60	15	
Vladivostok	Dec. 22–Jan. 28	5		
Warsaw	Oct. 5–Dec. 15	50	34	
Servia:				
Belgrade	Nov. 7–Feb. 21	122	48	
Spain:				
Almeria	Nov. 1–Jan. 31		9	
Barcelona	Nov. 30–Mar. 14		101	
Madrid	Nov. 1–Jan. 31		87	
Seville	Nov. 1–30		1	
Valencia	Dec. 1–Mar. 14	13		
Straits Settlements:				
Penang	Nov. 2–Dec. 6	13	1	
Singapore	Nov. 2–22	2		
Switzerland:				
Canton—				
Basel	Nov. 23–Mar. 7	115		
Genoa	Nov. 23–29	3	1	
Turkey in Asia:				
Adana	Jan. 10–24	2		Dec. 28, epidemic.
Beirut	Nov. 23–Mar. 7	278	125	
Jaffa	Dec. 6–Feb. 28	25	6	
Jerusalem	Feb. 1–28	1		
Messina	Jan. 4–Feb. 15	3		
Smyrna	Nov. 16–Feb. 14		164	
Tarsus	Dec. 28–Feb. 8			Still present.
Trebizond	Jan. 11–24			Present.
Tripoli	Jan. 25–Feb. 28	51	3	
Turkey in Europe:				
Constantinople	Nov. 20–Mar. 6		18	
Saloniki	Dec. 1–Mar. 7		87	

SANITARY LEGISLATION.

STATE LAWS AND REGULATIONS PERTAINING TO PUBLIC HEALTH.

RHODE ISLAND.

Glanders or Farcy—Importation of Horses, Asses, and Mules from Certain States—Regulation of. (Reg. Bd. of Agriculture, Feb. 3, 1914.)

Whereas, the disease known as glanders or farcy, which disease is contagious not only to horses, asses, and mules, but to human beings, has, in the opinion of the veterinarian appointed by the State Board of Agriculture of the State of Rhode Island become prevalent in Rhode Island and the States bordering on said State and in Indiana.

Now, be it known that by the power vested in the Rhode Island State Board of Agriculture by chapter 119, section 3 of the General Laws of Rhode Island, 1909, the following rules and regulations have been duly adopted by said State board of agriculture:

SECTION 1. All horses, asses, and mules brought into Rhode Island from the States of Massachusetts, New York, Indiana, and Connecticut must be accompanied by a permit upon which shall appear distinguishing marks describing such animal, issued by the said State veterinarian of the State of Rhode Island, and the arrival of all such animals must be reported to the said veterinarian within 24 hours after destination is reached, and they must remain in quarantine on the owner's premises and at the owner's expense until released by the said State veterinarian.

SEC. 2. All horses, asses, and mules so brought into this State from Massachusetts, New York, Indiana, and Connecticut, having first passed an examination and an opthalmic mallein test, as recognized by the United States Bureau of Animal Industry, made by a competent veterinarian before shipment, and the certificate of health having been issued by such veterinarian and duly approved by the proper authorities having jurisdiction over the diseases of domestic animals of the State from which such shipment is made, may be released from quarantine by the State veterinarian or his deputy. Such certificate shall contain a description of the animal examined by such veterinarian, together with distinguishing marks that appear on the same.

SEC. 3. All horses, asses, and mules brought into this State, not accompanied by such health certificate as provided in section 2 hereof, shall be examined by a veterinarian in such manner and such tests made as the State veterinarian may direct, at the expense of the owner or owners, upon arrival in this State, and the certificate of health issued by such veterinarian shall be subject to the approval of the State veterinarian before such animals are released from quarantine.

SEC. 4. All releases from quarantine will be issued by the State veterinarian or some assistant to be approved by said board of agriculture. All horses, asses, and mules found to be diseased will be killed as by law provided, the carcasses burned or buried or turned over to a rendering company for treatment in such a manner as not

to menace the public health and will prevent a spread of the disease, and the premises disinfected at the owner's expense.

SEC. 5. The foregoing rules and regulations do not apply to horses, asses, and mules that enter the State in their daily work or to such animals as are being transported through the State by common carriers aboard cars; but none of such animals while in transit shall, if unloaded for any necessary purpose, be permitted to go beyond the care and control of such common carrier.

SEC. 6. This order shall be published by furnishing copies to transportation companies doing business within this State and by general distribution among dealers in horses, asses, and mules and, when deemed necessary, by furnishing copies to applicants for permits to be issued in accordance with the provisions as stated above and by publishing the same once each day for five successive days in the Providence Journal, Providence Bulletin, Providence Tribune, Providence News, Newport News, Woonsocket Call, Pawtucket Times, Westerly Sun, Kent County News, and Pawtuxet Valley Times.

SEC. 7. These rules may, from time to time for the further protection to this State, be amended to include other States, Territories, and Provinces.

SEC. 8. Any person, firm, or corporation found guilty of violating the provisions of these rules and regulations shall be fined not more than $300, as prescribed in section 3 of said chapter 119 of the General Laws.

MUNICIPAL ORDINANCES, RULES, AND REGULATIONS PERTAINING TO PUBLIC HEALTH.

FALL RIVER, MASS.

Foodstuffs—Protection and Sale. (Reg. Bd. of H., July 8, 1913.)

SECTION 1. All premises, rooms, stores, markets, receptacles, and other places in which any article intended for human food is kept for sale or exposed for sale shall be kept clean and in a sanitary condition at all times to the satisfaction of the board of health. No such place shall be used for domestic purposes or open directly into any room so used, except with the approval of the board of health. In no such place shall there be a water-closet, but all such places shall be furnished with proper lavatory accommodations. No building in which articles intended for human food are kept or exposed for sale shall be occupied in whole or in part by horses, cattle, or other animals, and the storage of such articles in any cellar will be permitted only after the inspection and approval thereof by the board of health.

SEC. 2. All receptacles, refrigerators, and ice chests in which articles of human food are kept for sale or exposed for sale shall be kept clean and shall be so constructed and maintained as to prevent contamination of such food by flies, insects, vermin, or animals. All such refrigerators and ice chests and other places in which water may accumulate from the melting of ice shall be properly drained and so constructed as to provide access for thorough cleaning.

SEC. 3. All vehicles in which articles of human food are kept or exposed for sale, including vehicles used for delivery of such food to the purchaser, shall be kept clean; and all wagons, push carts, or other vehicle or conveyance used for the sale of such food by a vender or peddler shall be provided with a receptacle of sufficient size to contain the wastes of his business, in which receptacle all such waste shall be kept until disposed of in accordance with the regulations of the board of health.

SEC. 4. No butter, cheese, lard, bread, cake, pastry, or other flour and meal products prepared for consumption, preserved, peeled, or cut fruits, cracked nuts, nut meats, popped corn, candies, confectionery, or other food fit for human consumption without peeling, opening, or cooking, unless the same be contained in cans, jars, or other closed receptacles, shall be carried through the streets or exposed for sale in any public place or inside or outside of any market, shop, or store, or in any window, unless such food or food products are effectually covered and screened to protect them from contamination from dust, insects, and animals, and so kept covered and screened except while being examined by a customer or prepared for delivery: *Provided, however*, That strawberries, blackberries, and raspberries, liable to deterioration from covering, need not be so covered, but shall not be exposed in dusty or unclean places or in any place forbidden by the board of health or any of its officials.

No food of any description, except such as is inclosed in water-tight receptacles, shall be kept in any place accessible to the public unless the same be placed at an elevation of not less than 24 inches above the surrounding surface. The use of newspapers or of any wrapper that has been previously used, or of any unclean material for the purpose of wrapping any article intended for human food is prohibited; and all persons engaged in dividing, weighing, measuring, delivering, or otherwise han-

dling any article of food described or implied in this regulation shall be required to keep hands and person clean, and wherever outer garments are liable to come in contact with such food, they shall be clean or covered with clean material, and all such persons shall be free from any contagious or infectious diseases.

SEC. 5. Any person found guilty of any violation of this regulation made in accordance with chapter 448 of the acts of 1912,[1] may be punished according to the provi sions of the revised laws of the Commonwealth and amendments thereof.

FLINT, MICH.

Foodstuffs—Production, Care, and Sale—Bakery Products—Ice Cream—Candy. (Ord. June 20, 1913.)

SECTION 1. It shall be unlawful for any person, company, or corporation to expose for sale in the open air outside of any store or building fruits, berries, or confections within the city unless the same are kept in fly and dust tight compartments and are displayed on a shelf or platform at least 18 inches above the level of the ground.

SEC. 2. Kitchens of all restaurants, hotels, eating saloons, candy factories, meat markets, bakeries, shall be screened at all openings, so as to keep out flies and all other insects.

SEC. 3. The proprietor or keeper of every store, hotel, restaurant, eating saloon, or other place where oleomargarine is sold or furnished as a substitute for butter shall at all times exhibit in some conspicuous place on the wall of every store, or eating room a placard on which is printed in black ink, in plain Roman letters of not less than 3 inches in length, and not less than 2 inches in width the words "Oleomargarine used or sold here," so as to be easily and readily seen by all persons entering such store, or other room or rooms.

SEC. 4. All restaurants and eating saloons where foodstuffs are kept, prepared, cooked, or served to customers shall provide full protection from dust, dirt, flies, and vermin, by means of glass cases, wire screens, or other satisfactory device.

SEC. 5. All milk served with meals in any hotels, restaurants, eating saloons, and boarding houses shall conform to the standard prescribed in the milk ordinance of this city, now or hereafter enacted.

SEC. 6. It shall be the duty of the board of health, food inspector, or inspectors to inspect regularly all hotels, restaurants, and eating saloons.

SEC. 7. All persons handling foodstuffs shall use all reasonable precaution to keep themselves in a cleanly condition.

SEC. 8. *Bakeries and baked goods.*—All bread made or procured for the purpose of being sold, offered, or exposed for sale in the city of Flint, shall be made in a clean and sanitary place, of good and wholesome flour or meal containing no deleterious substance or material.

SEC. 9. Every bake shop shall at all times be clean and free from effluvia arising from any drain, water closet, or other nuisance, the floors shall be swept and scrubbed as may be neccessary to make them meet the requirements of this ordinance.

SEC. 10. All tables, benches, and dough troughs shall be movable so that the floors underneath are easily accessible. The tops of all working tables, benches, dough troughs, and similar articles shall be smooth and free from unnecessary roughness.

SEC. 11. All doors shall be screened, and self-closing; all outlets shall be screened. Fans shall be used, if needed, for ventilation, and openings therefor shall be screened.

SEC. 12. Provision shall be made outside the workrooms for storage of food materials, refuse, unused clothing, and other accessories.

SEC. 13. Sleeping rooms shall be separated by complete partition from all rooms where food or food materials are used or stored.

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[1] Public Health Reports, Dec. 13, 1912, pp. 2096-2097.

SEC. 14. All water used in the preparation of foods shall be from a strictly sanitary source.

SEC. 15. All walls and ceilings of workrooms shall be whitewashed, painted, or enameled white, and kept clean.

SEC. 16. All bread, in loaves or pieces weighing 8 ounces or more, shall be wrapped in clean paper before taken from the place of manufacture.

SEC. 17. All wagons used for transporting baked goods, other than wrapped bread, shall be provided with a fly proof and dust proof compartment containing shelves for baked products. Such shelves shall be covered with clean paper or pans, which paper or pans shall be changed or cleaned at least once in every 24 hours.

SEC. 18. It shall be unlawful for any proprietor, employee, or servant of a store where baked goods are sold or kept for sale to leave exposed bread, pies, cakes, or other baked goods, unless the same be protected by glass cases or similar device, satisfactory to the food inspector.

SEC. 19. All meat markets, slaughterhouses, and like places supplying meat or animal products to persons within the limits of the city of Flint shall be kept in a clean, wholesome condition, and free from noxious or offensive odors. Whenever any such place shall be found upon inspection to be in an unsanitary condition the occupant shall remove the cause at once upon being ordered to do so by the board of health or food inspector, and shall not be permitted to supply meat or animal products to any person or persons until such orders have been obeyed.

SEC. 20. It shall be the duty of the board of health, food inspector or inspectors, to inspect all meat markets, slaughterhouses, and other places where animals are slaughtered and sold for food purposes, at regular intervals, and report the conditions found to the board of health. Any person or persons refusing admittance to the board of health, food inspector or inspectors, for the purpose of making an inspection as required by this ordinance, or interfering in any manner with any of them, shall be deemed guilty of a violation of this ordinance.

SEC. 21. No refuse, tainted scraps or bones, rancid fat, or decaying flesh shall be kept in the ice box or cooler of any market or shop with fresh meat.

SEC. 22. Meat shall not be wrapped in newspapers or in any wrapping paper that is soiled or has been used for other purposes.

SEC. 23. The selling, offering for sale, or exposing for sale within the corporate limits of the city of Flint of any veal from a calf less than 4 weeks old, of the meat of any pig less than 6 weeks old, or that of any lamb less than 10 weeks old is hereby prohibited and declared unlawful.

SEC. 24. No meats, fish, oysters, birds, fowls, or animal products in an unsound, unhealthy, putrid, or unwholesome condition shall be brought to the city of Flint for the purpose of sale or gift as human food, nor shall the same be offered for sale by any person at or in any public or private market, store, stall, warehouse, cold storage, or other place in the city of Flint.

SEC. 25. It shall be unlawful to prepare, keep for sale, or sell any kind of meat, fowl, fish, or game in any room in which a toilet is located or in any room opening directly into a toilet, unless there is an outside ventilator.

SEC. 26. Meat which has been condemned shall be immediately destroyed or otherwise disposed of under the direction of the food inspector or inspectors.

SEC. 27. All meat markets shall have self-closing screen outside doors from May 1 until October 15 each year.

SEC. 28. No part of any animal slaughtered which is to be used for human food shall be carted or carried through the streets, avenues, or alleys unless it is covered by a clean canvas, so as to protect it from dust, dirt, and flies.

SEC. 29. Wagons used to convey meat from slaughterhouses, freight houses, freight cars, or farms to markets and stores in the city of Flint must be kept in clean, whole-

some condition. It shall be unlawful to use such wagons to deliver, cart, or haul meat scrap, refuse, tallow, swill, or garbage in the city of Flint.

SEC. 30. No meats, poultry, game, or fish shall be hung or exposed for sale in any street or outside of any shop, store, or market, or in the open windows and doorways thereof in the city of Flint, except it be covered or inclosed in a glass case, nor shall they be exposed in such shop, store, or market during the months of May, June, July, August, September, and October unless inclosed in dust and fly tight cases. This shall not apply to meat on the cutting block.

SEC. 31. *Ice cream.*—No ice cream shall be manufactured or stored in any building, or part of a building, which is used for the stabling of horses or other animals, or in any room used in whole or in part for sleeping purposes, unless such manufacturing or storage room is separated from other parts of the building, in some manner approved by the board of health of the city of Flint.

SEC. 32. Rooms in which ice cream is manufactured or stored for sale, shall be provided with tight walls and floors, and kept constantly clean.

SEC. 33. No urinal, water closet, or privy shall be located in the rooms mentioned in the preceding section, or so as to pollute the atmosphere of said rooms.

SEC. 34. All vehicles used in conveying ice cream for sale or distribution shall be kept clean and free from offensive odors.

SEC. 35. Ice cream kept for sale in any shop, restaurant, or other establishment shall be stored in a covered box or refrigerator therein.

SEC. 36. It shall be unlawful for any person, firm, or corporation to sell or offer for sale in the city of Flint any ice-cream cones, unless the same are protected from flies, dust, and dirt, by glass cases, mosquito netting, or similar device.

SEC. 37. Samples of ice cream shall be purchased from the various manufacturing places and drug stores and a chemical and bacteriological analysis made, which may be published in the daily papers, at the discretion of the board of health of the city of Flint.

SEC. 38. Ice-cream plants shall be inspected regularly by the food inspector and a written report made to the board of health of the conditions found.

SEC. 39. No person, firm, or corporation shall manufacture for sale, keep for sale, barter, or exchange or deal in ice cream which contains any substance other than milk, cream, eggs, sugar, neutral flavoring gelatin or vegetable gums, or which contains other than the required amount of butter fat.

SEC. 40. One-half of 1 per cent of harmless pure gelatin, gum tragacanth, or other vegetable gums may be used in the manufacture of ice cream as coloring.

SEC. 41. Ice cream shall be deemed to be adulterated within the meaning of this act if it contains formaldehyde, saccharine, or boric acid, or other substance or compound deleterious to health.

Sec. 42. No ice cream shall be sold in Flint which contains less than 10 per cent of milk fat except where nuts or fruits are used for the purpose of flavoring, when it shall not contain less than 8 per cent of butter fat.

Sec. 43. Ice cream returned to a manufacturer from whatever cause shall not be used again in the preparation of ice cream unless same is returned in an unopened ice cream can.

Sec. 44. *Candy.*—No person, firm, or corporation shall manufacture for sale, offer or expose for sale, sell or exchange or deliver or have in their possession with the intent to sell, any candy, candies, or confectioneries adulterated by the admixture of terra alba, barytes, or other earthy or mineral substances, or any poisonous colors, flavors, or extracts or other dangerous and deleterious substances or ingredients detrimental to health.

Sec. 45. Any person, company, or corporation, its officers or agents, violating any provisions of this ordinance, shall upon conviction thereof, before a court of com-

petent jurisdiction, be punished by a fine not exceeding $100, or by imprisonment in the county jail of Genesee County, or other place of confinement provided by the city of Flint, for a period of time not exceeding 90 days, or by both such fine and imprisonment in the discretion of the court who shall try the offender.

GREENWICH, CONN.

Sanitary Inspector—Appointment and Duties—Municipal Laboratory. (Act May 26, 1913).

SECTION 1. The health officer of the town of Greenwich shall appoint a sanitary inspector who shall be well trained in public hygeine and sanitary science and graduated from some reputable college or technical institution. Said sanitary inspector shall hold office at the pleasure of the town health officer and shall act under his direction. He shall render reports to said health officer, which reports shall be incorporated in the report of the health officer to the town, and shall have all the powers that town health officers and milk inspectors have: *Provided*, Nothing herein shall give said sanitary inspector the right, power, or authority to make any rules, regulations, or orders respecting his duties without the approval of the town health officer. He shall have charge, under direction of the health officer, of the town laboratory hereinafter provided for, and of the inspection of milk, water, ice, food exposed for sale, sewers, and plumbing, and shall assist the town health officer in the abatement of nuisances, the prevention of communicable diseases, and in carrying out all other measures necessary for the public health and sanitary regulation of the town.

SEC. 2. The board of estimate and taxation shall fix the salary of said sanitary inspector, which shall not be less than $1,500, and shall be paid out of the general funds of the town upon the requisition of the chairman of said board.

SEC. 3. The town health officer shall establish, equip, and maintain a laboratory for the investigations required by section 1 and shall employ such assistants and nurses and provide such equipment, supplies, and transportation facilities as he may find necessary, subject to the approval of the board of estimate and taxation, which assistants and nurses, while employed as aforesaid, shall have all the powers necessary to carry their orders into effect.

HAGERSTOWN, MD.

Milk and Cream—Production, Care, and Sale. (Ord. Sept. 4, 1913.)

SECTION 1. On and after January 1, in the year 1914, it shall be unlawful for any person or corporation to sell, exchange, or deliver any milk or cream within the corporate or sanitary limits of Hagerstown, Md., without first obtaining a permit so to do from the sanitary board of the city of Hagerstown, and that such permit shall be issued by the city clerk as other permits are issued upon application by the person or corporation desiring to sell, exchange, or deliver milk or cream within said city or its sanitary limits, and the payment of $1 to said city clerk, and upon the production to him of a certificate signed by the Washington County dairy inspector, which said certificate shall contain the following, namely, that the applicant's dairy, stables, and milk cows have been inspected by said dairy inspector or some other person satisfactory to the sanitary board of Hagerstown acting in his stead, and found to be clean and in a proper sanitary and healthy condition, and that the tuberculin test has been applied to said cows in accordance with the Maryland State sanitary regulation, and shall further contain the statement that the applicant will comply with all other reasonable rules and regulations adopted by the sanitary board of Hagerstown from time to time, and that the tuberculin test will be applied to each additional cow added to his dairy herd, and that said applicant will have said tuberculin test applied to each cow in his said herd annually.

The application for a permit shall be made in writing and upon blanks provided by the said sanitary board for that purpose on which shall be stated the name of the applicant, the location of his, her, or its place of business, the number of cows, if owned or controlled by said applicant, the location of any dairy or dairies other than his own from which he secures or proposes to sell milk, the number and description of all wagons or other vehicles to be used by the applicant in his said business.

SEC. 2. Every person or corporation offering to sell, exchange, or deliver milk or cream within the corporate or sanitary limits of Hagerstown from any wagon or vehicle shall have printed or painted on both sides of said vehicle in a conspicuous place the name in full of the owner thereof, the number of his, her, or its permit, the exact location of his, her, or its dairy, with name of street and number in full thereon, or if located on a road, pike, or unnumbered street, the name of the same in full and in letters and numbers not less than 2 inches in size; nor shall any person or corporation sell, exchange, or deliver or have in his or her or its possession or custody, with intent to sell, exchange, or deliver within the corporate or sanitary limits of Hagerstown any milk from which the cream, or any part thereof, has been removed, unless the cans or other receptacles containing such milk shall have the outside thereof painted in a bright red color and kept so painted at all times whilst in use for said purpose, and such cans or other receptacles shall also have painted in plain black letters, not less than 3 inches in length and not less than 1 inch in width, on both sides thereof, not less than 6 inches from the top of such cans or other receptacles the words "Skimmed milk": *Provided, however*, That these provisions shall not apply to skimmed milk sold in bottles; in such cases the words "Skimmed milk" shall be stamped or printed clearly and legibly on the cap or stopper closing said bottles.

SEC. 3. It shall not be lawful for any person or corporation selling, exchanging, or delivering milk or cream within the corporate or sanitary limits of Hagerstown that has been stored or kept in any stable or room used for sleeping or for domestic purposes, or in any room having any communication with any such stable, or room, or with any water-closet apartment nor in any room which is dark, poorly ventilated, or dirty, nor in which rubbish or useless material is allowed to accumulate or where there are any offensive odors; nor shall any cans or other receptacles containing milk or cream offered for sale, exchange, or delivery within the corporate or sanitary limits of Hagerstown be allowed to stand on the sidewalk or outside of store doors.

SEC. 4. Before any person or corporation shall sell, exchange, or deliver any milk or cream within the corporate or sanitary limits of Hagerstown, he, she, or it shall have all cans, bottles, and other receptacles for milk and cream thoroughly cleansed and sterilized by steam or hot water before filling the same as provided in section 3 of this ordinance, and all cans or other receptacles containing milk or cream for sale within the corporate or sanitary limits of Hagerstown, must be so protected by suitable coverings and must be so placed in the storeroom or diary that the milk and cream will not become contaminated with street dirt and dust.

SEC. 5. Before any person or corporation shall sell, exchange, or deliver any milk or cream within the corporate or sanitary limits of Hagerstown all dippers, measures, and other utensils used for handling milk or cream must be kept clean and sanitary while in use, and shall be thoroughly washed and sterilized directly after each day's use; nor shall any person having any contagious diseases or coming in contact with any person having any contagious diseases, sell, exchange, or deliver any milk or cream within the corporate or sanitary limits of Hagerstown.

SEC. 6. All persons or corporations selling, exchanging, or delivering milk or cream within the corporate or sanitary limits of Hagerstown shall keep the same cooled until delivered to the customer at a temperature not to exceed 70° F.; but no milk or cream so sold, exchanged, or delivered as aforesaid shall be cooled by placing ice in the same; nor shall any milk or cream offered to be sold, exchanged, or delivered

within the corporate or sanitary limits of Hagerstown be misrepresented, either orally or by writing, printing, or by sign, marks, labels, or otherwise.

SEC. 7. No person or corporation shall transfer any milk or cream while selling, exchanging, or delivering the same, from one can, bottle, or receptacle into another can, bottle, or receptacle, that has been exposed to street or road dust, or selling, exchanging, or delivering any milk or cream in bottles, cans, or other receptacles from one private house, apartment, or tenement house to any other private, apartment, or tenement house, within the corporate or sanitary limits of Hagerstown.

SEC. 8. No person or corporation shall sell, exchange, or deliver any milk or cream within the corporate or sanitary limits of Hagerstown when any foreign substance has been added thereto or placed therein for the purpose of thickening, coloring, or preserving the same; nor when it contains any pathogenic bacteria or germs, pus cells, or blood cells, nor when it contains more than 500,000 bacteria or germs of all kinds to the cubic centimeter; nor when any water has been added thereto; nor when any part of it has been drawn from a cow fed on refuse or unwholesome food; nor when any part of it has been drawn from an unhealthy or dirty cow; nor from a cow kept in an unclean shed or stable, or has been milked by unclean milkers, or when any part of it has been drawn from a cow within 30 days before or 5 days after parturition; nor in any case before a cow is free from fever; nor when milk contains less than 3½ per cent butter fat; nor when cream contains less than 18 per cent butter fat.

SEC. 9. No bottle, can, or other receptacle used for the reception, delivery, or storage of milk or cream within the corporate or sanitary limits of Hagerstown shall be received from any private house, apartments, or tenement house within the corporate or sanitary limits of Hagerstown when any person therein has any infectious or contagious disease without the written consent of the city sanitary board of Hagerstown, Md.

SEC. 10. The sanitary board of Hagerstown be and is hereby authorized and empowered to appoint one properly qualified food, water, and dairy inspector at a proper and reasonable salary per annum, who shall be a competent chemist and bacteriologist, whose duties shall be to act in conjunction with the said sanitary board of Hagerstown and under its instructions and supervisions, to properly enforce the provisions of this and other sanitary ordinances.

SEC. 11. Any person violating any of the provisions of this ordinance, shall, upon conviction therefor before any one of the police justices of Hagerstown, have his license or permit suspended or revoked or be subject to a fine of not less than $1 nor more than $50 and costs, and upon failure to pay said fine and costs, shall be committed to the Washington County jail for a period of not less than 5 days nor more than 20 days or until said fine and costs are paid.

SEC. 12. This ordinance shall take effect on and after the 1st day of January, 1914.

HAMILTON, OHIO.

Foodstuffs, Unwholesome—Sale Prohibited—Disposition of. (Reg. Bd. of H., Oct. 2, 1913.)

It is hereby ordered and required by the board of health, city of Hamilton, Ohio, that it shall be unlawful for anyone to sell, offer for sale, or have in their possession with intent to sell, any unripe, overripe, decayed, or unwholesome fruit or vegetables, any putrid, tainted, or unwholesome meat or meat products, or any filthy, dirty, or unwholesome food, drink, confections, or any other article intended for human consumption; and the health officer and all officers of the department of health are hereby authorized and directed to immediately confiscate and denaturize or destroy any such fruit, vegetables, meat or food products mentioned above, when offered for sale or found in the possession of any one.

Traveling Shows—Inspection by Health Officer—Permit Required. (Reg. Bd. of H., Sept. 4, 1913.)

Whereas smallpox and other contagious diseases are existing to an unusual extent in various parts of the United States, therefore be it

Ordered and required by the board of health, city of Hamilton, Ohio, that all traveling companies giving theatrical exhibitions, shows, circuses, carnivals, and other public exhibitions, in the city of Hamilton, whereby the general public will be brought together and in contact with the employees of such traveling theatrical companies, carnival companies, shows, etc., shall first obtain a permit from the health officer, before such exhibition shall be given. The health officer or his assistants are hereby ordered and required to inspect the baggage, paraphernalia, and other possessions and also to inspect the employees and to take such other action as may be necessary to prevent the introduction of contagious diseases in the city of Hamilton by said theatrical companies, carnival companies, shows, etc.

Foodstuffs—Production, Care, and Sale—Meat—Bakery Products—Milk—Fruit—Vegetables. (Ord. 946, Mar. 6, 1913.)

SECTION 1. *Stores and markets.*—That no person, persons, firm, or corporation shall operate any bakery, confectionery, creamery, dairy, dairy barn, milk depot, laboratory, hotel, restaurant, lunch counter, lunch stand, or eating house, packing or slaughter house, ice-cream plant, or any other place where any butter, butterine, meat, fruit, cake, bread, candy, confectionery, fish, fowl, vegetables, lard, cheese, poultry, or any other food product or article is manufactured, packed, stored, deposited, collected, prepared, kept, or exposed for sale, offered for sale, produced, or sold for any purpose whatsoever, unless the said food products or articles are securely protected by covering or otherwise so as to be thoroughly free from contamination from dust, dirt, flies, and all other foreign or injurious substances.

SEC. 2. It shall be and is hereby declared to be the duty of every owner, agent, manager, or other person in control of any store, market, or other place where any of the food products heretofore mentioned are prepared for sale, stored, sold, or exposed for sale to cause the same to be screened in such a manner as to prevent the patrons or prospective purchasers from handling the same.

SEC. 3. Every owner, manager, agent, or other person in control of any store, market, or other place where the food products heretofore mentioned are prepared for sale, stored, sold, or exposed for sale, shall keep such public or private market or stall, shop, store, bakery, ice-cream plant, warehouse, storehouse, cold-storage plant, wagon, vehicle, or other place in a clean, pure, wholesome and sanitary condition.

SEC. 4. *Bread, pies, etc.*—All bread or other food products in transportation from the place or places where such bread or other food products are prepared, shall be protected while in transit in such a manner as to exclude dust, flies, insects, or vermin.

All grocers, bakers, confectioners, or other dealers selling bread or other flour products shall protect the same from dust, flies, and vermin in glass cases or receptacles, which shall be kept clean, pure, and in a sanitary condition.

Newspapers or other waste paper shall not be used in wrapping or covering bread or other food products.

SEC. 5. *Fruits.*—No person or persons, firm, or corporation shall sell or expose for sale within the limits of the city of Hamilton, Ohio, save and except during the months of December, January, February, and March, any fruit or foodstuff which is subject to contamination by contact with flies, unless the said fruit or foodstuff is covered with glass or wire screening no coarser than No. 12 standard wire mesh, which must not touch the fruit or foodstuff which it is intended to protect: *Provided, however,* That the following fruits and foodstuffs shall not be considered subject to contamina-

tion, to wit: Watermelons, and all other kinds of melons, oranges, lemons, bananas, potatoes, carrots, turnips, cabbages, parsnips, onions, squashes, pumpkins, and other fruit and produce brought in the city in original packages or sacks, so long as such original packages or sacks are unbroken or unopened.

SEC. 6. No person, persons, firm, or corporation shall deposit or allow to remain within 2 feet of the surface of any sidewalk, street, alley, lot, store, or other public place in the city of Hamilton any article of food or food product for sale for human consumption, unless the same shall be contained in water-tight receptacles, so as to be protected from dogs and other animals.

SEC. 7. *Tickets.*—No person, persons, firm, or corporation handling food products in the city of Hamilton, Ohio, shall sell any milk tickets or any other tickets to be exchanged for food or food products when delivered, except in coupon cards perforated for detaching, each coupon to be exchangeable for 1 pint, 1 quart, or other unit of milk, cream, or milk product, or for one loaf of bread or other unit of food products, provided that other units of sale are permissible. No card of such coupons shall be sold more than once, and no coupon shall be sold detached from said card or shall be used the second time.

SEC. 8. *Meats and fish.*—It shall be unlawful to bring into this city, or sell, expose, or offer for sale in any market, public or private, any cattle, sheep, hog, or lamb, or any meat, fish, game, or poultry that is diseased, unsound, unwholesome, or that for any other reason is unfit for human food.

Sec. 9. All meat, fowl, game, or fish exposed for sale in the public market, the public streets, butcher shops, or any other place in the city of Hamilton, Ohio, shall be kept free from dust, dirt, flies, and vermin, and in a sanitary condition; and no meat or meat products shall be sold from any butcher's wagon unless such wagon shall be provided with a sanitary dust-proof and properly iced refrigerator box or container such as will meet with the approval of the board of health. No meat or meat products shall be sold or prepared in any room, building, or other place which shall communicate directly with any toilet room or water-closet.

Sec. 10. The body of any animal or any part thereof which is to be used for food shall not be carted or carried through the streets or avenues, unless it be so covered as to protect it from dust and dirt; and no meat, poultry, game, or fish shall be hung or exposed for sale in any street or outside of any shop or store, or in the open windows and doorways thereof in the city of Hamilton, Ohio.

Sec. 11. No one shall sell or offer for sale any meat that is kept fresh by salicylic or boracic or any other preservative.

Sec. 12. All meat dealers, butchers, or fish mongers must keep their stores, sale rooms, market stalls, slaughterhouses, tools, and all appurtenances thereto in a clean and sanitary condition and provide proper drainage and ventilation for the same.

Sec. 13. No meat dealer or butcher shall keep meat, fish, or fowls in any refrigerator or ice box unless the same shall be lined with lead or some other proper substance, so as to be water-tight, not unless the same be provided with proper drainage.

Sec. 14. *Employees.*—No owner, agent, manager, or person operating any place designated in the first section of this ordnance shall knowingly require, permit, or allow any persons to work in such place or in any vehicle or other place occupied or used for the purpose or purposes who is infected with smallpox, diphtheria, scarlet fever, tuberculosis, typhoid fever, measles, mumps, whooping cough, chicken pox, or any other infectious, contagious, venereal, or loathsome disease.

SEC. 15. *Milk.*—No milk or cream shall be sold, kept, offered, or exposed for sale, stored, transported, exchanged, carried, delivered, or in any manner disposed of, drawn from cows within 15 days before and 12 days after parturition, nor shall the same be mixed with any other milk or cream for such purposes.

SEC. 16. No owner, agent, manager, or other person, whether servant or employee, dealing in milk shall give, furnish, sell, offer for sale, expose for sale, or deliver any

milk, skimmed milk, buttermilk, sour milk, or cream, in quantities of 1 gallon or less, unless the same be inclosed in a sanitary transparent glass bottle, said bottle to be sealed with a suitable cap or stopper, which shall have indelibly indicated upon said cap or stopper in a legible and conspicuous manner the name of the person, persons, firm, or corporation placing said milk or cream in such bottle. Said bottle or receptacle shall be sealed immediately after filling, which filling and sealing shall only be done in a milk house or creamery which is kept in a clean and sanitary condition. No owner, agent, manager, servant, employee, or other person shall give, furnish, sell, offer for sale, have in their possession for sale, or deliver any milk, or any kind of cream or milk product, in quantities exceeding 1 gallon unless the receptacle or can containing the same is securely sealed with a lock or chain, wire and seal, or other contrivance equally efficient: *Provided, however*, That persons or dealers engaged in the wholesale delivery of milk, cream, or milk products and not carrying milk in bottles may deliver the same from unsealed but tight-covered cans or receptacles, the covers of which must not be perforated: *And provided further*, That the wagon or wagons used for said wholesale delivery shall have inscribed upon both sides, in plain letters not less than 3 inches in height, the words "Wholesale delivery."

SEC. 17. No person shall transfer any milk from any can, bottle, or receptacle to another in or upon any street, alley, thoroughfare, delivery wagon, or other vehicle where the same may be exposed, except in a milk house or creamery which is kept in a clean and sanitary condition.

No person shall fill or refill with milk or any milk product any glass jar, bottle, can, or other receptacle with intent to sell or vend such milk or milk product unless such jar, bottle, can, or other receptacle be first thoroughly cleansed and sterilized.

The cleaning and sterilization of all milk bottles, cans, or other receptacles in which milk or milk products are handled, kept, stored, sold, or offered for sale, shall be subject to the approval of the board of health or its executive officer.

SEC. 18. No person shall remove from any dwelling or other place in which there exists an infectious or contagious disease any bottle or other receptacle which has been or is to be used for containing or storing milk or any milk product without written permission of the board of health or its executive officer.

SEC. 19. No person shall sell, exchange, deliver, or have in his possession with intent to do as aforesaid, or otherwise dispose of for human food, any milk the temperature of which is above 50° F. No milk or milk product offered for sale shall be of such character that the bacterial count shall be above 500,000 bacteria per cubic centimeter; and no person shall sell, exchange, deliver, or otherwise dispose of for human food, or have in their possession with intent to dispose of the same, any milk or milk product in which flies, vermin, other insects, manure, dust, dirt, or other contaminating material is found.

SEC. 20. All milk the temperature of which shall be found upon examination or test to be above 50° F. or which shall contain insects, dirt, filth, or any other contaminating material, or which shall exceed 500,000 bacteria per cubic centimeter shall be considered and deemed unfit for human food, and when offered or exposed for sale or found in the possession of any person shall be confiscated, forfeited, and immediately destroyed or denatured by and under the direction of the board of health or its executive officer. All vats or receptacles in which milk is handled or contained at the milk house, creamery, or dairy shall be kept properly screened, so as to be inaccessible to flies at all times from March 1 to December 1.

SEC. 21. *Glasses.*—All glasses or other vessels used in confectioneries, soda fountains, ice-cream parlors, saloons, or other places where ice cream, drinks, or beverages are sold at retail shall be cleansed in running water immediately after being used by customers and before said vessels are again used in serving said ice cream, drinks, and beverages.

The beer coils in all saloons in the city of Hamilton, Ohio, shall be cleansed and sterilized at least once each week.

All air pumped into beer or other gaseous beverages shall be taken from the outside of the building in which it is vended.

Sec. 22. *Kitchen and dining room.*—The following sanitary conditions shall be maintained in the kitchens, dining rooms, and in all other rooms where foodstuffs are served, stored, or kept, or hotels, restaurants, lunch stands, or boarding houses:

Floors shall be cleaned, water-tight, and free from litter and accumulated dirt; the side walls and ceilings free from cobwebs and accumulated dirt, well plastered, papered, or kalsomined; the counters, tables, shelves, sinks, drains, bins, and cabinets cleaned; refrigerators, ice boxes, and cold-storage rooms free from foul and unpleasant odors, mold, or slime; doors and windows properly screened; dining rooms and kitchens well lighted and ventilated. Dishes, tableware, and kitchen utensils must be washed and rinsed in clear water after using. Food served to customers and then returned to the kitchen or serving room must not be again used. All garbage must be removed daily. Back rooms, back yards, and cellars must be kept clean and free from rubbish and ashes. Cellars, unless properly arranged, must be well lighted and ventilated and free from moisture, and they must not be used for storage or prepared foods, unless such foods are in glass or other air-tight containers. Spittoons must not be placed in any dining room nor other places where food is served. Water-closets must not be located in or immediately in connection with rooms used for preparing, serving, or for storing food.

Sec. 23. No person shall sleep in any room where foodstuffs are prepared or stored.

Sec. 24. Gas ranges, cook stoves, and all devices and utensils employed in cooking or preparing food must be clean. Refrigerators and ice boxes must be drained and kept clean and free from offensive odors.

Sec. 25. All canned and preserved goods must be removed from the original package when opened; storeroom, pantries, kitchens, or other places where food is prepared or stored must be well ventilated and free from dampness, roaches, ants, bugs, or other insects, rats, or mice.

Sec. 26. Persons affected with cancers, venereal or other communicable diseases, shall not be employed in any restaurant, hotel, boarding house, or other place where food is served.

Sec. 27. *Confectioneries.*—All rooms or buildings used for the manufacture, handling, storing, or selling of candies or other confections must comply specifically with the following requirements:

(*a*) Floor shall be of water-tight construction and maintained in a sound condition; walls and ceilings shall be smooth and tight and kept painted in some light color; window space shall be equivalent to at least 10 per cent of floor space. Toilet rooms shall not be in direct connection with any such room. Efficient washstands shall be provided.

(*b*) Every employer is required to maintain himself and his employees in a clean condition while engaged in the manufacture or preparing of candies or confections.

(*c*) The walls, ceilings, floors, windows, furniture, and all cooking devices and utensils shall be kept absolutely clean and sanitary at all times.

(*d*) No person or persons shall be allowed to sleep in any room where candies or confections are prepared or manufactured, nor shall any person use tobacco in any form in any room where candies or confections are prepared or manufactured.

(*e*) All rooms used for preparing or manufacturing candies or confections must be kept free from dampness, roaches, ants, bugs, or other insects, rats, or mice.

(*f*) During fly seasons all rooms used in manufacturing candies or confections shall be kept free from any flies, either by screens or revolving fans.

(*g*) It shall be unlawful for any person suffering from any contagious, infectious, or venereal disease to engage in the manufacture or preparation or sale of candies or confections.

SEC. 28. *Penalty.*—It shall be the duty of every police officer and every employee of the health department of the city of Hamilton, Ohio, to enforce the provisions of this ordinance.

SEC. 29. Any person, persons, firm, or corporation violating any of the provisions of this ordinance, upon conviction thereof, shall be fined not less than $10 or more than $100 and the cost of prosecution.

HARTFORD, CONN.

Foodstuffs—Care and Sale—Unwholesome Foodstuffs. (Ord. Sept. 1, 1913.)

No person shall sell or offer for sale, or have in his possession with intent to sell, for human food in this city any unwholesome, decayed, or stale fruit, vegetables, or provisions of any kind whatsoever, or any tainted, diseased, decayed, or unwholesome meat, fowl, or fish, or any milk or other liquid used as food or drink by human beings that shall be so contaminated as to be injurious to the public health; or the flesh of any calf which weighed less than 50 pounds when killed and dressed or which was less than four weeks old when killed.

Every person being the owner, lessee, or occupant of any room, stall, vehicle, or place where any article used by man to be eaten or drunk shall be stored or kept, sold, or offered for sale, shall put and keep such place and its appurtenances in a clean and wholesome condition; and no person, either principal or agent, having charge of or interested or engaged in the care or custody of any such article so used by man, except fruits and vegetables that are peeled, pared, or cooked before consumption, shall keep, sell, offer for sale, display, or transport any such article unless the same is protected from dust, dirt, flies, soiled papers, newspapers, and all kinds of contamination.

Upon any meat, birds, fowl, fish, fruit, vegetables, or any articles of food or drink being found by any member or inspector of the board of health in a condition which renders them, in his opinion, unwholesome and unfit for use as human food, then such inspector or member of the board of health may forbid the same being offered or exposed for sale, or being sold for human food, until the owner or party in charge or other proper person has obtained consent of the superintendent of health to their being so offered, used, or sold. And thereupon, if the superintendent of health shall have approved the judgment of the said inspector or member of the board of health, said officer may order said articles destroyed or may permit the owner or any party in charge to speedily remove such articles from any market, street, or public place, but not to sell or dispose, or offer to sell or dispose, thereof for the purpose of human food.

Any person violating the provisions of this ordinance or disposing of any condemned article without permission of the superintendent or an inspector of the board of health shall upon conviction be fined not more than $50 for each offense.

HAVERHILL, MASS.

Communicable Diseases—Quarantine—Placarding—Disinfection. (Reg. Bd. of H., Sept. 15, 1913.)

SEC. 18. Whenever it comes to the knowledge of the board of health or its agent that any person in the city of Haverhill is afflicted with either diphtheria or scarlet fever, said agent of the board of health shall cause one or more suitable placards or warning signs to be placed at once in a conspicuous position or positions upon, at, or near the front, rear, or side entrance or entrances to the premises in which such person is; said placards or signs shall contain, printed thereon in large letters, the name of the

disease with which said person is afflicted, and, in small letters reference to interfering with such placard or warning sign; if such premises be a hospital, asylum, hotel, or apartment house said placards or warning signs may, in the discretion of the agent of the board of health, be placed in a conspicuous position or positions within said premises, at such place or places as said agent of the board of health may determine; said placards or warning signs shall be displayed as aforesaid until such premises and the contents thereof are disinfected to the satisfaction of said agent of the board of health, as certified by him, and for such time thereafter as may be necessary to demonstrate the freedom of occupants of said premises from said diseases.

SEC. 19. No person afflicted with smallpox, varioloid, diphtheria, membranous croup (so-called), typhus fever, or scarlet fever, and no person having access to any person afflicted with any of the said diseases shall mingle with the general public until such sanitary precautions as may be prescribed by the board of health, or its agent, shall be complied with; and no householder in whose dwelling there occurs any of the said diseases shall permit any person suffering from any of said diseases, or any clothing or other property, to be removed from the house without the consent of the board of health, or its agent, who shall prescribe the conditions of removal; nor shall any occupant take up a residence elsewhere, without the consent of said board, or its agent. No person shall, within the city, without a permit from the board of health, or its agent, carry or remove from one building to another, or from any vessel to the shore, any person sick of any of the said diseases; nor shall any person, by any exposure of any individual sick of any of said diseases, or of the body of such person, or by any negligent act connected therewith, or in respect of the care or custody thereof, of by a needless exposure of himself, cause or contribute to, or promote the spread of disease from any such person or from any dead body.

SEC. 28. Any person who has symptoms that so resemble those of diphtheria, scarlet fever, epidemic cerebrospinal meningitis, or typhoid fever that they can not be distinguished therefrom with reasonable certainty shall be regarded for the purposes of these regulations as suffering from the diseases whose symptoms he presents: *Provided, however,* That no warning signs shall be displayed except in cases definitely diagnosed as diphtheria or scarlet fever.

SEC. 29. The term "absolute quarantine" as used in these regulations shall be construed to mean and include, first, absolute prohibition of entrance to or exit from a building or conveyance except by officers or attendants authorized by the health authorities, and the placing of guards, if necessary, to enforce this prohibition: second, the posting of warning placards, stating the name of the disease, in a conspicuous place or places on the outside of the building or conveyance: third, the prohibition of the passing out of any object or material from the quarantined house or conveyance; fourth, provision for conveying the necessaries of life, under certain restrictions, to those in quarantine.

The following diseases shall be placed under absolute quarantine: Asiatic cholera, smallpox, and yellow fever, and the quarantine shall be continued until raised by an authorized agent of the board of health.

SEC. 30. The term "modified quarantine" as used in these regulations shall be construed to mean and include, first, prohibition of entrance and exit, as in absolute quarantine, except against certain members of the family authorized by the health authorities to pass in and out under certain definite restrictions; second, the placing of a placard or placards as under absolute quarantine; third, isolation of the patient and attendants. The wage earner is allowed, under modified quarantine, to continue to work provided he at no time comes in contact with the patient and attendants, and that he has and uses facilities for thoroughly cleansing his hands immediately before leaving the premises. In permitting householders and wage earners to continue work when their premises are under modified quarantine, it shall be understood that such

persons shall not be employed in an establishment maintaining the production, sale, or manufacture of candy or food products, including milk and ice cream; nor shall such person be employed as a teacher of children nor in any other capacity that brings them in intimate contact with children.

The following diseases shall be placed under modified quarantine: Diphtheria and scarlet fever: *Provided*, That where in the judgment of the board of health, or its agent, the community will be endangered by permitting the liberties of modified quarantine said board or its agent may, at its or his discretion, institute absolute quarantine.

SEC. 31. Persons permitted access to and exit from households under modified quarantine shall abstain from attending places of amusement, worship, or education, and as far as possible from visiting other private houses.

SEC. 32. The agent of the board of health shall make such investigations into the nature and origin of cases of acute anterior poliomyelitis occurring in the city of Haverhill as in his judgment may be necessary to prevent the spread of said disease, and shall cooperate with persons having charge of patients afflicted with such disease as he deems needful for the prevention of the spread thereof. And in the discharge of each and all of the duties herein imposed the agent of the board of health may act not only in person, but also through employees in the service of the health department duly designated by him for that purpose.

Any person who is afflicted with symptoms that so resemble those of acute anterior poliomyelitis that they can not be distinguished therefrom with reasonable certainty shall be regarded for the purposes of these regulations as afflicted with said disease.

SEC. 33. It shall be the duty of the person in charge of any patient afflicted with acute anterior poliomyelitis, if said person has power and authority so to do, to adopt each and every one of the following precautions to prevent the spread of such diesase:

(*a*) To isolate the patient immediately upon the discovery of the nature of the disease, as thoroughly as is practicable, from all persons who are not suffering from the same disease and who are not necessarily in attendance upon the patient, and to maintain such isolation until the temperature of the patient has returned to normal and for two weeks thereafter or the death of the patient.

(*b*) To disinfect each and every article used by or about the patient and all excreta from the patient and such other articles, if any, as have been specially exposed to infection before the removal of such article or excreta from said room or rooms, if practicable, and otherwise as soon thereafter as is practicable.

(*c*) To disinfect the room or rooms occupied by the patient, and all articles contained therein, before said room is again occupied and within three days after the removal, recovery, or death of the patient unless such disinfection has been done by the health officer.

SEC. 34. It shall be unlawful for any person, having power and authority to prevent, to permit a patient afflicted with acute anterior poliomyelitis, at any time between the onset of the disease and the expiration of two weeks after the return of the patient's temperature to normal, to do, and it shall be unlawful for any such patient to do, any of the following things:

(*a*) To appear upon the public street.

(*b*) To appear in school, church, store, or place of amusement, or in any other place of public assemblage.

(*c*) To enter a public conveyance, except a vehicle designated by the health officer for the conveyance generally of persons afflicted with minor contagious diseases, or a vehicle designated by the health officer for the conveyance of the particular case.

(*d*) To go or to be carried from place to place over the public streets without authority from the health officer, except that in case of an emergency and prior to the reporting of a case the patient may be moved, under direction of a registered physician, from the place where the case is found to some other place in the city of Haverhill

suitable for its reception, but in such instances the report cards shall indicate the place where the case occurred, as well as the place to which the patient has been removed.

SEC. 35. No person shall knowingly expose himself or any other person, or, if he has power and authority to prevent, permit any other person to be exposed, to infection by acute anterior poliomyelitis, unless such exposure is necessary for the proper care and treatment of the patient.

SEC. 36. No person who is nursing a patient afflicted with acute anterior poliomyelitis shall mingle with other persons who are not so engaged and who are not afflicted with the disease from which the patient is suffering until after said person has removed such outer garments as have been worn in the sick room and has properly disinfected the hands and face, and the hair, if the hair has not been covered while in the sick room.

SEC. 37. No person residing in any dwelling house or in any family when there is in said dwelling house or family a patient afflicted with acute anterior poliomyelitis shall, while so residing and prior to the expiration of two weeks after the temperature of the patient has returned to normal, attend public or private school or Sunday school.

Privies and Cesspools—Construction and Care. (Reg. Bd. of H., Sept. 15, 1913.)

SEC. 7. No person, firm, or corporation shall own, construct, or maintain a privy vault, privy, or cesspool on any lot or premises where a public sewer is accessible, and privy vaults and cesspools shall be so constructed and maintained as to prevent the access of flies to the excrement deposited therein, and to protect the soil from contamination. Privy vaults shall be built of metallic substance, or of hard-burned brick, laid in cement, with a cement or concrete floor or bottom at least 3 inches thick, and shall be made water-tight, and so suited and constructed as to exclude all surface drainage. Whenever the use of a privy vault is discontinued, such vault shall be cleaned to the bottom and filled up with earth or other suitable material; and no person, firm, or corporation shall maintain a water-closet, privy, or privy vault in an unwholesome, unclean, or imperfect condition.

IRVINGTON, N. J.

Domestic Animals—Keeping of—Permit. (Reg. Bd. of H., May 1, 1913.)

SECTION 1. That section 64 of the ordinance of which this ordinance is amendatory be, and the same is amended to read as follows:

SEC. 64. That no person or persons or corporations shall have or keep upon any premises in the town of Irvington, any live cattle, sheep, goats, swine, pigeons, chickens, ducks, geese, or fowl of any kind unless a permit be granted by the board of health for that purpose, which permit shall be renewable annually on or before the first day of May and registered in the board, and for each and every permit so granted the sum of 10 cents for each animal shall be paid, except that the sum of 50 cents shall be paid for a permit to keep pigeons, ducks, chickens, geese, or any fowls. Such fowl shall not be permitted to run or fly at large, but shall be kept in a house or coop with an inclosed runway, and when so ordered by the board of health said house or coop shall be floored under the roost with cement or other water-tight flooring. All buildings or inclosures erected and maintained for the purpose of keeping animals or fowls must be kept in a sanitary condition, and under the direction of the board of health.

All buildings or inclosures made or erected for the purpose of keeping therein pigeons, chickens, ducks, geese, or any fowls shall be located at least 20 feet from the doors or windows of any building used as a dwelling or for business purposes, unless ordered or permitted by the board of health, and where said dwellings are tenement houses, no such building or inclosure shall be erected in the yard thereof,

unless the dimensions of said lot are at least 25 by 100 feet, and under no conditions shall any person keep or allow to be kept in any dwelling house or part thereof any horse, cattle, swine, goats, or fowls. Should offensive or obnoxious odors arise from buildings or inclosures where such animals or fowls are kept, and complaint made to the board of health, the owner of said animals or fowls shall be served with a notice to abate such nuisance within 15 days from the date of service of such notice. If the said owner of said animals or fowls neglects or refuses to comply with said notice, or if after such notice has been given said house or inclosures still continue to be obnoxious or offensive, the sanitary inspector shall make a complaint before the town recorder of such fact, and if said owner is convicted of the offense complained of, besides the penalty imposed by said recorder, the board of health shall revoke the permit granted by them for keeping such animals or fowls.

Should an application for a permit to keep animals or fowls be made to the board of health, and if a majority of the members of said board of health deem it for the better preservation of the sanitary condition of said town that the application for a permit to keep animals or fowls be rejected, said application shall be returned to the applicant with the reasons for the rejection thereon stated, and said applicant may request a hearing upon said application by giving said board of health notice of such fact.

The board shall thereupon set a time for said hearing, which hearing shall be before the board; and if after considering all the facts presented, and a majority of the members of the board vote against the same, no permit shall be granted.

Any person or persons or corporation offending against or violating any of the provisions contained in section 64 shall, on conviction thereof, forfeit and pay a penalty of not more than $50 nor less than $10, and the permit of such person, persons, or corporation so convicted shall, at the discretion of the board of health, be revoked.

Domestic Animals—Disposal of Dead Bodies. (Reg. Bd. of H., Dec. 4, 1913.)

SECTION 1. It shall be the duty of every owner of any animal which shall die from accident or disease or be killed for any purpose other than the consumption of food, within the limits of the town of Irvington, to give notice of such death at the office of the board of health in the town of Irvington (or at the police headquarters in the town of Irvington) within three hours after such death shall have taken place; provided, however, if such death takes place after sundown then said notice shall be given by 10 o'clock in the forenoon of the ensuing day.

SEC. 2. It shall be unlawful for any person or persons, excepting the sanitary inspector of the board or the contractor for the removal of dead animals, to transport or carry any such animal as is described in the first section of this ordinance from the place where such animal shall have died to any place within or without the limits of the town of Irvington, which animal is a nuisance or is offensive or dangerous to the public health by reason of the disease of which it died, or by reason of putrefaction, without first having obtained permission in writing from the board of health of said town, and no such permit shall be granted unless there be a written application for the same, signed by the owner of such dead animal.

SEC. 3. If at any time in the judgment of the sanitary inspector of the board of health any animal such as is mentioned in the first section of this ordinance is a nuisance or offensive and likely to be dangerous to public health, or if the owner of such animal shall neglect or fail to apply for and receive the permit mentioned in the second section of this ordinance, or in case such permit shall be given and such owner shall neglect or fail to remove such animal without the limits of the town of Irvington within the time mentioned in the permit or within such period of time after the death of such animal as in the judgment of the sanitary inspector is proper to prevent such animal from becoming a nuisance or offensive and likely to be dangerous to

public health, it shall be lawful for the sanitary inspector to cause the removal of such dead animal forthwith by the contractor for the removal of dead animals, or in such other way as shall seem most expedient under the circumstances.

SEC. 4. It shall be unlawful for any person or persons to bring within the limits of the town of Irvington or carry or transport through the streets, avenues, or highways thereof any dead animal which shall have died from accident or disease or been killed for any purpose other than consumption as food without the limits of the town of Irvington without having applied for and obtained permission in writing from this board. No such permit shall be granted except upon the like application mentioned in section 2 of this ordinance.

SEC. 5. Any permit granted under the provisions of this ordinance may set forth such regulations in respect to such removal or transportation as in the judgment of this board, the secretary thereof, or the sanitary inspector thereof, may be necessary and proper to prevent such dead animal from decaying or being a nuisance, or offensive and likely to be dangerous to the public health; and the failure to comply with any such regulation shall be considered a forfeiture of the permit and shall subject such person or persons to the penalties hereinafter provided for the removal or transportation of dead animals without the permission hereinafter described.

SEC. 6. It shall be unlawful for any person or persons, firm or corporation, other than the sanitary inspector, or the contractor for the removal of dead animals to remove from any public street or public place in the town of Irvington the carcass of any dead animal such as is mentioned in the first section of this ordinance.

SEC. 7. Any person or persons, firms or corporation, which shall be convicted of a violation of any of the provisions of this ordinance shall be imprisoned not exceeding 10 days, or shall pay a fine not exceeding $50.

JACKSON, TENN.

Stables and Manure—Care of. (Reg. Bd. of H., Aug. 8, 1913.)

RULE 1. That any and all persons using or maintaining any public or private stable in this city for hitching, keeping, or feeding a horse, mule, or cow, or any number of such animals, be and they are hereby required to keep such stable in a cleanly and sanitary condition, and to place or cause to be placed all stable manure from such stables in a receptacle or receptacles properly screened so as to keep out the flies, and such stable manure shall be kept in said screened receptacles until removed for use or be handled beyond the city limits; and it is hereby declared to be unlawful for any person to keep or allow the accumulation of fresh stable manure on their premises within the corporate limits of this city unless the same be properly screened and protected from flies.

RULE 2. That any person, firm, or corporation failing or refusing to comply with or violating these rules and regulations shall be deemed guilty of a misdemeanor and subject to a fine not less than $5 nor more than $25 for each and every offense.

JACKSONVILLE, FLA.

Midwifery—Regulation of the Practice of. (Ord. M–41, Dec. 31, 1913.)

SECTION 1. From and after April 1, 1914, it shall be unlawful for any person to engage in or perform the duties of midwifery as defined in this ordinance without having passed a satisfactory examination in the elementary principles of midwifery. It shall be the duty of the city board of health to provide, free of charge, instruction in the simple principles of midwifery which shall comprise such examination. The city board of health shall issue certificates to all persons who shall obtain in such examination a grading of at least 75 per cent. No test of the literacy or education of the applicants shall form part of the examination. No fee of any kind shall be charged

for the examination or the certificate, and no instruction or advice shall be given to the applicants by anyone connected with the holding of the examination or the issuing of the certificate as to the amount of compensation midwives should or shall receive for their services.

SEC. 2. As used in this ordinance the practice of midwifery means the offering or undertaking by any person to assist for a compensation of any kind a woman in normal childbirth, but it does not include at any childbirth the use of any instruments, nor the assisting of childbirth by any artificial, forcible, or mechanical means, nor the performance of any version, nor the removal of adherent placenta, nor the administering, prescribing, advising, or employing in childbirth of any drug other than a disinfectant. This ordinance shall not be construed as applying to any practitioner of medicine authorized to practice medicine under the laws of the State of Florida, nor shall it authorize any midwife to practice medicine.

SEC. 3. Any person who shall practice midwifery in the city of Jacksonville without said certificate of the city board of health shall be fined not more than $25 or imprisonment for not more than 30 days for the first offense, and for a second offense not less than $10 nor more than $100, or imprisonment for not exceeding 60 days, or both.

SEC. 4. The city board of health may revoke, for good cause, after full public hearing, the certificate of any person holding the same who is clearly shown to be an unsuitable person to engage in said practice.